

TECHNICAL MEMORANDUM

TO: Arizona Department of Environmental Quality
Ms. Maribeth Greenslade

FROM: Florence Copper Inc.
Dan Johnson

SUBJECT: Closure and Post-Closure Plan
Florence Copper Project, Production Test Facility
Florence, Arizona

Dear Ms. Greenslade:

In accordance with requirements set forth in the Temporary Aquifer Protection Permit No. 106360 (APP), Florence Copper Inc. herewith submits the Closure and Post-Closure Plan required by Section 2.9.1 of the APP. This plan has been prepared in accordance with requirements of Arizona Revised Statutes § 49-252 and Arizona Administrative Code R18-9-A209 (B)(3), and incorporates elements specifically identified in Section 2.9.1 of the APP, including:

- Updated closure and post-closure financial requirements.
- Contingency mine block rinsing and sampling, as needed.
- Confirmation Production Test Facility (PTF) mine block sampling requirements after the completion of the pilot test.
- Confirmation underground workings sampling requirements after the completion of the pilot test.
- Outline of contents for PTF Summary Report that incorporates updated groundwater modeling at the cessation of the pilot test.
- An initial 5-year post-closure groundwater monitoring period, with an evaluation to complete additional post-closure monitoring.
- Five-Year Post-Closure Groundwater Monitoring Report that incorporates updated groundwater modeling.

Please contact me at 520-374-3984 if you require any additional information.

Sincerely,
Florence Copper Inc.

A handwritten signature in black ink, appearing to read 'Daniel Johnson', with a stylized flourish at the end.

Daniel Johnson
Vice President – General Manager

cc: David Albright, USEPA
Nancy Rumrill, USEPA

Enclosure:
Closure and Post-Closure Plan

FLORENCE COPPER INC.

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1 Introduction

1.1 Background

Florence Copper Inc. (Florence Copper) has prepared this Closure and Post-Closure Plan in response to requirements set forth in Section 2.9.1 of the Temporary Aquifer Protection Permit (APP) P-106360 (Permit). This plan has been prepared in accordance with requirements of Arizona Revised Statutes (A.R.S.) § 49-252 and Arizona Administrative Code (A.A.C.) R18-9-A209(B)(3) and includes information that describes the closure and post-closure activities proposed by Florence Copper for the Production Test Facility (PTF) located on State land leased by Florence Copper (Mineral Lease No. 11-26500). The closure and post-closure plans and the cost estimates presented in this document are specific to the PTF and conform to closure and post-closure plans and cost estimates previously submitted to the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (USEPA) as part of APP and Underground Injection Control (UIC) Permit applications.

1.2 PTF Discharging Facilities

As described in the Permit, the PTF includes the following discharging facilities:

- In-Situ Area Injection and Recovery Well Block
 - The well block includes four injection wells, nine recovery wells, seven observation wells, four multi-level sampling wells, well heads, piping, and liners.
- Process Water Impoundment
- Run-off Pond

There are no other existing discharging facilities located within the Pollutant Management Area. All wells and core holes within 500 feet of any injection well or recovery well in the PTF well field have been abandoned in accordance with requirements of UIC Permit R9UIC-AZ3-FY11-1.

1.3 Closure Objective

The closure objective is to ensure compliance with the requirements of A.R.S. §§ 49-243 B.2 and B.3 by preventing discharges of any pollutant that will cause or contribute to a violation of an Aquifer Water Quality Standard (AWQS) at the Point of Compliance (POC), or that will further degrade at the POC the quality of any aquifer that at the time of permit issuance violates the AWQS for that pollutant. To achieve the stated objective, Florence Copper proposes to restore groundwater in the injection and recovery zone. The groundwater will be restored to a quality where constituents with AWQS meet the AWQS or pre-operational concentrations if the pre-operational concentrations exceed the AWQS. Florence Copper also proposes to close surface facilities in a manner that will prevent contamination of the soil that could cause an exceedance of the pre-determined Soil Remediation Levels (SRLs) for residential property as listed in Appendix A of the Arizona Soil Remediation Standards and the Groundwater Protection Limits (GPLs) established by the ADEQ.

This closure strategy addresses all components of the PTF, including APP-exempt facilities, to provide a comprehensive view of all proposed closure activities. This strategy and the related cost estimates address closure activities required by the APP, UIC, and the Arizona State Land Department (ASLD) programs. To avoid duplicative financial assurance, the total amount of financial assurance provided to the ADEQ has

been reduced by the amounts covered by requests made by the USEPA for a separate financial assurance instrument.

1.4 Closure and Post-Closure Plan Requirements

A.R.S. § 49-252 requires that the owner or operator of a groundwater protection permit facility notify the director of the intent to permanently cease an activity for which the facility or a portion of the facility was designed or operated, and to submit a closure plan within 90 days of the notification. The PTF is operated under the terms of a Temporary APP permit that has a duration of 1 year, with an optional 1-year extension. Operation of the PTF is planned to extend for the full permitted duration, including the optional extension if granted. Although A.R.S. § 49-252 requires that the owner or operator submit a closure plan within 90 days' notice of the intent to permanently cease operations, the Permit requires the closure plan to be submitted earlier, during a period of time when operations are still planned to be ongoing. Consequently, this closure plan has been prepared and submitted 90 days after operations commenced, while operations are planned to continue for the period of the permit.

A.A.C. R18-9-A209(B)(3) requires that closure plan submitted to the director in accordance with A.R.S. § 49-252 include the following information:

1. Site investigation plan;
2. Summary describing the results of site investigations and additional related information;
3. Closure design; and
4. Estimate of closure costs.

In addition to these requirements, Section 2.9.1 of the Permit requires the following:

Within 90 days of the effective date of this permit, the permittee shall submit for approval to the Water Permits Section, a Closure Plan which meets the requirements of A.R.S. § 49-252 and A.A.C. R18-9-A209(B)(3) and includes the following topics:

1. Updated closure and post-closure financial requirements.
2. Contingency mine block rinsing and sampling, as needed.
3. Confirmation PTF mine block sampling requirements after the completion of the pilot test.
4. Confirmation underground workings sampling requirements after the completion of the pilot test.
5. Outline of contents for PTF Summary Report that incorporates updated groundwater modeling at the cessation of the pilot test.
6. An initial 5-year post-closure groundwater monitoring period, with an evaluation to complete additional post-closure monitoring.
7. Five-Year Post-Closure Groundwater Monitoring Report that incorporates updated groundwater modeling.

Each of the requirements set forth in A.A.C. R18-9-A209(B)(3) and in Section 2.9.1 of the Permit are addressed below.

2 Description of Closure Activities

2.1 PTF Well Field Closure

Closure activities in the PTF well field will occur in the order of the following three steps: (1) restoration of groundwater quality in the injection and recovery zone to levels meeting AWQS or pre-operational concentrations, if the pre-operational concentrations exceed AWQS; (2) closure (abandonment) of all PTF wells in accordance with the Well Abandonment Plan; and (3) closure of related surface facilities in the well field, including the pipeline corridor.

Hydraulic control will be maintained in the injection and recovery zone from the time that injection began until the groundwater quality has been restored to a point that meets closure criteria specified in the APP and UIC permits. Groundwater restoration will begin after the scheduled operations have been completed and after notice is given in accordance with A.A.C. R18-A209.B.2.

The groundwater restoration process includes rinsing the injection and recovery zone to reduce constituent concentrations to levels that meet AWQS or pre-operational concentrations, if the pre-operational concentrations exceed AWQS. Groundwater pumped from the injection and recovery zone will flow through the same tanks, piping, and equipment used during PTF operations and will serve to rinse the tanks, piping, and equipment with increasingly high-quality water over a period of several months. As a result, tanks, piping, and equipment will have been thoroughly rinsed by the time that ADEQ and USEPA approve the groundwater restoration and authorize the abandonment of the wells. This will allow removal of all tanks, piping, equipment, and liners from the well field to the runoff pond to commence simultaneously with the abandonment of the wells. For contingency purposes, however, the last PTF components to be dismantled will be, in order, the runoff pond and the water impoundment.

2.1.1 Groundwater Restoration Process

Following submittal of notice of permanent cessation in accordance with A.A.C. R18-A209.B.2 and a closure plan has been submitted in accordance with A.A.C. R18-A209.B.3.

1. Restoration of groundwater will begin after lixiviant injection has been discontinued. Restoration will be accomplished by using groundwater to sweep residual in-situ copper recovery (ISCR) solutions into recovery wells. The groundwater may be pulled from the aquifer surrounding the wellfield or it may be pumped from nearby wells and then injected into the injection and recovery zone. Injection may include periodic dosing with a neutralizing material such sodium bicarbonate in accordance with Section 2.9.2 of the Permit. The duration, rate, and extent of injection and neutralization will vary as the concentrations of sulfate and other constituents detected in ISCR solutions in the recovery well header vary during the restoration process. Injection may occur through the wells used for injection during the PTF's operations, or the injection wells may be converted for use as recovery wells and vice versa in order to increase the rate of restoration.
2. As groundwater restoration nears completion, all injection wells will be converted to recovery wells to ensure that concentrations in recovery well header(s) are representative of groundwater quality injection and recovery zone.
3. Rinsing will continue and sulfate concentrations in the recovery well header solution will be periodically sampled.

4. When sulfate concentrations in the recovery well header solution decline below 750 milligrams per liter (mg/L), a sample of header water will be collected and analyzed for the Level 2 parameters (all parameters listed in Section 4.1, Table 4.1-7 of the Permit and Table P-4 of the UIC Permit).
5. Samples will be periodically collected from the recovery well header(s) and analyzed for Level 2 parameters until all constituents with AWQS either meet the AWQS or pre-operational concentrations, if the pre-operational concentrations exceed the AWQS. (Pre-operational concentrations will be obtained by collecting groundwater samples from all PTF wells prior to the commencement of operations and analyzing the samples for all Level 2 parameters.) The “indicator sulfate concentration” will be the sulfate concentration in the recovery well header(s) existing at the time that the Level 2 analysis indicates that constituents with AWQS meet the AWQS or meet pre-operational background concentrations if those concentrations exceed the AWQS. After the indicator sulfate concentration has been determined, each well will be sampled for sulfate. Hydraulic control will continue until the sulfate concentration at each well is determined to meet the indicator sulfate concentration or alternate concentration as explained below. Provided that hydraulic control is maintained, pumping from any well may be suspended when groundwater quality at that well is determined to meet the indicator sulfate concentration or alternate concentration.
6. Once the sulfate concentration at each well is less than the indicator sulfate concentration or alternate concentration, hydraulic control will be suspended at all wells for 30 days.
7. Confirmation sampling at the PTF well block will be conducted after 30 or more days have elapsed. The recovery wells will be re-energized and the sulfate concentration in solutions in the recovery well header(s) will be analyzed for sulfate. If the sulfate concentration(s) are equal to or below the indicator sulfate concentration or alternate concentration, the closure criteria will be deemed to have been met and the rinsing and maintenance of hydraulic control of the injection and recovery zone will be discontinued.
8. Contingency mine block rinsing will be conducted as needed based on results of the confirmation sampling. If the sulfate concentrations are greater than the indicator sulfate concentration, rinsing will be restarted and continued until concentrations drop below the indicator concentration. Once the indicator concentration is achieved, hydraulic control will again be suspended for 30 days and step 7 listed above will be repeated.
9. A closure report documenting the results of the restoration process will be submitted to ADEQ and USEPA and closure of the PTF wells will commence promptly after ADEQ and USEPA have reviewed the report and have authorized the abandonment of the wells.

The use of a well-specific alternate to the sulfate indicator concentration is based on the recognition that the sulfate concentration in some wells may be higher than the sulfate indicator concentration due to well-to-well variability in sulfate concentrations. A well is eligible for an alternate concentration only if the sulfate concentration is less than 750 mg/L and the constituents meet AWQS or pre-operational concentrations if they exceed the AWQS.

2.1.2 PTF Well Closure

The PTF wells will be closed in accordance with the schedule described in Section 7 below if APP No. 101704 and UIC Permit No. R9UIC-AZ3-FY11-1 are not amended to authorize continued ISCR operations prior to the expiration of the temporary APP for the PTF. If the permits are amended to authorize commercial ISCR operations, the wells in the PTF well field will be subject to the requirements of those permits. If the wells are required to be closed within the term of the temporary APP, they will be abandoned in accordance with the Plugging and Abandonment Plan (Well Abandonment Plan), Attachment Q of the

UIC Application. The Well Abandonment Plan is based on requirements of A.A.C. R12-15-816, administered by the Arizona Department of Water Resources, and 40 CFR 146.10, administered by the USEPA.

2.1.3 Closure of Well Field Surface Facilities

Once the PTF wells have been abandoned, all remaining equipment will be removed. Such equipment may include electrical equipment, power lines and poles, tanks, pipes, and all liners within the well field. During the removal process, some liquid and solid residues may be generated such as the removal of accumulated dust from liners. Such liquids and solid residues will be placed in the runoff pond or water impoundment or shipped to appropriately licensed off-site disposal facilities.

Decommissioned power poles, lines, and electrical equipment may be salvaged. Clean liners and pipes may also be salvaged or sent to facilities that recycle such material. All material that cannot be reused or salvaged will be transported to an appropriately licensed facility for disposal.

Once all equipment, liners, and other materials have been removed from the well field, pipeline corridor, and other PTF components, disturbed areas will be tested, backfilled as needed, disked, and graded to level and contour the disturbed areas and any related berms to pre-development grades. The areas will then be prepared for seeding. Seeding of disturbed or reclaimed areas will occur only between 15 September and 30 November.

2.2 PTF Processing Facility Closure

The PTF processing facilities include the water impoundment, runoff pond, pipeline corridor, and processing buildings. The water impoundment and runoff pond are discharging facilities, the pipeline corridor and processing buildings are not discharging facilities but will be addressed and closed based on the potential for process related impacts.

All closure activities will be designed and conducted in accordance with applicable criteria in the Best Available Demonstrated Control Technology Guidance Manual. All closure activities will be conducted in a manner to prevent spillage of contaminants onto soil and, as tanks and underlying liners are removed, underlying soil will be inspected for signs of leakage. The same process will apply to the liners of the pipeline corridor, the runoff pond, and the water impoundment.

The water impoundment and runoff pond will be closed by removal in accordance with requirements of the ASLD. As the groundwater restoration process proceeds, the emptied tanks and ponds will be rinsed with water produced during the restoration process and the rinse water will be placed in the water impoundment. Closure of the PTF components will require safe handling and disposal of all solutions associated with the facilities. Process tanks and the runoff pond will be emptied of any remaining solution. All solutions will be shipped off site for use or disposal in accordance with applicable regulations, or they will be neutralized and placed in the water impoundment. The solid contents of the water impoundment and runoff pond will be removed, profiled, and transported to an appropriately licensed facility for disposal. Following removal of the impoundment and pond contents, the liners will be removed, profiled, and transported to an appropriately licensed facility for disposal. The excavated area will be backfilled, disked, and graded to pre-development grade. Seeding of the area will occur only between 15 September and 30 November.

The pipe and any sediment residue will be removed from the pipeline corridor, and liners will be removed, profiled, and transported to an appropriately licensed facility for disposal. The excavated area will be

backfilled, disked, and graded to pre-development grade. Seeding of the area will occur only between 15 September and 30 November.

At closure, unused electrowinning reagents, fuels, lubricants, and other chemicals along with warehoused materials will be packaged in accordance with Department of Transportation regulations and shipped off site or disposed of in accordance with applicable regulation. All chemicals will be removed off site and disposed of in a manner that meets all applicable codes and regulations. The processing buildings will be dismantled/demolished. Metal building components will be recycled, and concrete building components will be profiled and transported off site to an appropriately licensed disposal facility.

3 Site Investigation Plan

This site investigation plan provides details regarding characterization and analysis of residual impacts from PTF operations should they occur. As described above, groundwater restoration will be conducted at the PTF well field until water quality standards established in the APP and UIC permits are achieved. Following completion of groundwater restoration, Florence Copper will conduct a site investigation to identify and characterize potential residual impacts from PTF operations. The site investigation will include the following elements; evaluation of groundwater quality data, soil sampling, and sampling of concrete materials.

This investigation will establish the lateral and vertical extent of impacts to soils and groundwater using applicable standards; the approximate quantity of chemical, biological, and physical characteristics of each waste, impacted water, or impacted soil to be removed from the facility; the approximate quantity of chemical, biological, and physical characteristics of each waste, impacted water, or impacted soil that will remain at the facility; and will establish information related to the fate and transport that may influence the scope of sampling necessary to characterize the site for closure.

Evaluation of Groundwater Quality Data

Evaluation of groundwater quality data from the PTF observation wells, supplemental monitoring wells, and POC wells will be conducted as part of the Site Investigation. The focus of this evaluation will be to ensure that permit established groundwater quality standards are met at the PTF observation wells and supplemental monitoring wells, and that AWQS or background water quality conditions (whichever are higher) are met at the POC. The location of the PTF observation wells, supplemental monitoring wells, and POC wells are shown on Figure 1.

PTF Observation Wells

Evaluation of the PTF observation well water quality data will include comparison of groundwater quality data from the PTF observation wells from the beginning and end of the groundwater restoration period. The PTF observation wells include wells O-01, O-02, O-03, O-04, O-05, O-06, and O-07.

The purpose of this comparison is to identify wells with elevated indicator parameter concentrations relative to the other observation wells and to document groundwater restoration at the perimeter of the wellfield. If indicator analyte concentrations are observed at the PTF observation wells in excess of the groundwater restoration standard established in the Permit, additional confirmation groundwater sampling will be conducted at the affected well(s). If the observed elevated concentrations are confirmed, Florence Copper will propose corrective action to achieve the restoration standard at the affected well(s).

Supplemental Monitoring Wells

Evaluation of supplemental monitoring well groundwater quality will include comparison of groundwater samples collected following groundwater restoration to permit established water quality standards for each of the supplemental monitoring wells. The supplemental monitoring wells include wells MW-01, M-55UBF, M56-LBF, M57-O, M58-O, M59-O, M60-O, and M61-LBF.

The purpose of this comparison is to identify potential groundwater quality impacts at the supplemental monitoring well locations. If indicator analyte concentrations are observed at the supplemental monitoring wells in excess of the groundwater Alert Levels (ALs) established for each of these wells in Table 4.1-6B of the Permit, additional confirmation groundwater sampling will be conducted at the affected well(s). If the observed elevated concentrations are confirmed, Florence Copper will collect samples for the parameters listed in Table 4.1-7B of the permit. If an AL value listed in Table 4.1-7B of the Permit is

exceeded and confirmed, Florence Copper will propose corrective action to achieve the AL at the affected well(s).

POC Wells

Evaluation of POC well groundwater quality will include comparison of groundwater samples collected following groundwater restoration to permit established water quality standards for each of the supplemental monitoring wells. The POC wells include wells M14-GL, M15-GU, M23-UBF, M22-O, M52-UBF, M54-O, and M54-LBF.

The purpose of this comparison is to identify potential groundwater quality impacts at the supplemental monitoring well locations. If indicator analyte concentrations are observed at the POC wells in excess of the AL/Aquifer Quality Limits (AQLs) established for each of the wells in Table 4.1-6 of the Permit, additional confirmation groundwater sampling will be conducted at the affected well(s). If the observed elevated concentrations are confirmed, Florence Copper will collect samples for the parameters listed in Table 4.1-7 of the Permit. If an AL value listed in Table 4.1-7B of the Permit is exceeded and confirmed, Florence Copper will propose corrective action to achieve the AL/AQL at the affected well(s).

Soil Sampling

Due to the extensive use of liners, containment sumps and other control technologies, it is anticipated that soil contamination will be minimal and that the PTF soils will qualify for clean closure in accordance with A.A.C. R18-9-A209.B.3. As liners are removed, they will be inspected for evidence of holes, tears, or defective seams that may have leaked. Soil in the area beneath the liner will be inspected and samples will be collected and analyzed for the indicator parameters listed for priority pollutant metals and barium. Sampling and analysis will be focused in any area where visible contamination is apparent (e.g., moist spots beneath liners) and a broader grid sampling approach where contamination is not apparent. Estimates of sampling costs are included in the closure cost estimates provided in Attachment A.

If indicator analyte concentrations are observed that exceed an SRL or a GPL, additional confirmation sampling will be conducted in the affected area(s) to delineate the extent of the affected area. If the observed elevated concentrations are confirmed, Florence Copper will propose corrective action to achieve the SRL or GPL in the affected area.

4 Site Investigation Report

At the conclusion of site investigation activities, Florence Copper will prepare a report describing the results of the site investigation and providing additional relevant information. The report will describe the lateral and vertical extent of soil and groundwater impacts relative to applicable standards and will include analytical data to support the determination of extent. The report will describe the approximate quantity of chemical, biological, and physical characteristics of each material scheduled for removal, and the quantity of each material planned to remain at the facility. The report will provide the destination of materials to be removed from the site, and documentation that the destination is approved to accept the materials. The report will also provide additional relevant information describing site conditions and fate and transport of materials remaining on site after closure, if any.

The site investigation report will include updated groundwater model analyses that incorporate data and information developed during PTF operations and that characterize the fate and transport of potential groundwater impacts. A draft outline of the site investigation report is included as Attachment B to this closure plan.

5 Closure Design

The PTF facility is located on State Land, and reclamation and closure requirements are governed by the terms of the Mineral Lease (No. 11-26500) issued by ASLD. The ASLD requires that all PTF facilities be removed from State Land and contouring the site to match the natural landscape and landforms. The Lease also requires closure activities to comply with requirements APP No. P-106360.

Once all equipment, liners, and other materials have been removed from the PTF site, and site investigation sampling and analysis completed, the ground surface will be disked and graded to level and contour the disturbed areas and any related berms to pre-development grades. The areas will then be prepared for seeding. Seeding of disturbed or reclaimed areas will occur only between 15 September and 30 November. A copy of the ASLD Lease is included as Attachment C and the mine reclamation and closure plan approved by ASLD is included as Attachment D to this closure plan.

6 Monitoring

6.1 Closure Monitoring

Closure monitoring will consist of physical inspections of surface facilities and monitoring of groundwater quality at the POC wells and supplemental monitoring wells during the closure period. Inspection monitoring of surface facilities will continue through the closure period at each of the locations and at the frequencies specified in the Permit (as proposed in Table 15-5, Attachment 15 of the Temporary APP Application) until liquid and solid residues have been removed from the facilities being monitored.

POC well and supplemental monitoring well monitoring will be conducted in accordance with the requirements of the temporary APP (as proposed in Attachment 15 of the Permit Application) at the seven proposed POC wells listed in Temporary APP No. 106360 and the seven supplemental monitoring wells identified in the UIC Permit. The POC well and supplemental monitoring well monitoring programs will include two components (Level 1 and Level 2). Level 1 and Level 2 monitoring refer respectively to sampling and analysis of groundwater for the parameters listed in Tables 4.1-6, 4.1-6B, 4.1-7, and 4.1-7B of Temporary APP No. 106360. The monitoring will occur quarterly for Level 1 parameters and annually for Level 2 parameters. The contingency plan will be implemented in accordance with the temporary APP and the UIC Permit throughout the closure period with respect to inspection monitoring as long as liquids and solid residues remain in the facilities being monitored. The contingency plan will be implemented with respect to the exceedance of ALs and AQLs listed in Tables 4.1-6, 4.1-6B, 4.1-7, and 4.1-7B of Temporary APP No. 106360 throughout the closure period.

6.2 Post-Closure Monitoring

The post-closure monitoring program will primarily involve groundwater monitoring at the seven POC wells and supplemental monitoring wells because, during closure, all injection and recovery wells will be properly abandoned. All other PTF components used to store or manage ISCR solutions will also be dismantled and removed after all material contained in the components have been removed. Inspection of the closed areas will occur during POC well and supplemental monitoring well monitoring events and will focus on POC wells, supplemental monitoring wells, signage, fences, re-vegetated areas, and storm water control measures. The inspections will also focus on the maintenance of conditions required to support disturbed areas to conditions existing prior to the development and operation of the PTF or to such other conditions as specified by ASLD in Mineral Lease 11-26500, as may be amended. Photographs and written reports will be used to document observed conditions.

Groundwater monitoring at the POC wells and supplemental monitoring wells will be conducted quarterly throughout the post-closure period with Level 1 monitoring conducted three quarters per year and Level 2 monitoring conducted one quarter per year. Data generated from each monitoring event will be promptly reviewed and the contingency plans referenced in Section 2.6 of Temporary APP No. 106360 and the UIC Permit will be followed in the event of an exceedance of an AQL.

6.3 Post-Closure Monitoring Report

At the conclusion of post-closure monitoring activities, Florence Copper will prepare a report describing the results of post-closure monitoring. The report will describe the lateral and vertical extent of soil and groundwater impacts relative to applicable standards and will include analytical data to support the determination of extent of those impacts, should any exist at that time. The report will update the approximate quantity of chemical, biological, and physical characteristics of any material removed from

the site during the post-closure monitoring period for off-site disposal and will update the quantity of each material remaining at the facility. The report will describe the disposal of materials removed from the site, if any, and will provide documentation that the destination was approved to accept the materials. The report will also provide updated groundwater model analyses that incorporate data and information developed during the post-closure monitoring period that characterize the fate and transport of potential groundwater impacts.

7 Closure/Post-Closure Schedules

7.1 Closure Schedules

After Florence Copper formally gives notice to ADEQ in accordance with A.A.C. R18-9-A209(B)(2), and to USEPA of its intent to permanently cease PTF operations, injection of lixiviant will be discontinued. However, Florence Copper will maintain hydraulic control at the PTF wellfield until closure criteria specified in the temporary APP and the related UIC Permit have been met. Florence Copper will also continue all monitoring required by the temporary APP and the related UIC Permit.

The closure schedule presented below is based on the recognition that A.A.C. R18-9-A210(E) provides that a temporary APP expires after 1 year unless it is renewed, and that the permit may be renewed no more than one time. If the temporary permit is renewed, Florence Copper proposes to operate the PTF for up to 14 months and to begin closure no later than the first day of the 15th month. For purposes of estimating the closure costs, an estimate was prepared of the amount of sediment and liquid remaining in the water impoundment at the end of the 14th month and at the end of the 23rd month, following commencement of operations. The estimated amounts assume the pregnant leach solution flow from the recovery wells during ISCR operations will be 300 gallons per minute (gpm), which is equivalent to the maximum design flow (expressed as gallons per day) and 250 gpm during the restoration phase.

It is estimated that up to 9 months will elapse between the time that lixiviant injection ceases and the time that groundwater is determined to meet the closure criteria. As described above, abandonment of the PTF wells may not proceed until ADEQ and USEPA review a report describing the results of the closure activities and approve the abandonment of the wells.

It is estimated that up to 2 months will be required to abandon the wells and complete closure of all PTF surface facilities once ADEQ and USEPA approve the abandonment of the wells and contractors have mobilized to the site. The relatively short time estimate is based on the recognition that tanks and piping will have been well rinsed before the approval to abandon the wells is given. That will allow closure of most surface facilities to begin at the same time that well abandonment begins. Closure of the runoff pond and the water impoundment will begin promptly after closure of the well field commences and after they are determined to be no longer needed to receive rinse water or other liquids generated during the closure process. Florence Copper will submit a notice and report, with documentation, in accordance with the requirements of A.A.C. R18-9-A209(C) within 30 days following completion of the closure plan.

7.2 Post-Closure Monitoring Schedule

Temporary APP No. 106360 allows a 5-year post-closure period, as described below. Accordingly, the attached cost estimate is for a 5-year period.

- Years 1 through 4: Three quarterly Level 1 sampling events and one quarterly Level 2 event will be conducted each year. Quarterly reports will be submitted to ADEQ and USEPA.
- Year 5: Three quarterly Level 1 sampling events and one quarterly Level 2 event will be conducted. Quarterly reports will be submitted to ADEQ and USEPA. In addition, during the first quarter, a report will be submitted to ADEQ and USEPA that summarizes trends and describes significant events observed during the previous 4 years. Based on the information provided in the report, Florence Copper will recommend continuation of post-closure monitoring or cessation of post-closure monitoring. If Florence Copper recommends continuation of monitoring, the recommendation may include proposed changes in the scope and frequency of analysis. Within

180 days following its receipt of the report, ADEQ and USEPA will advise Florence Copper of their decisions. The monitoring program will continue throughout the fifth year until such time that ADEQ and USEPA announces their decisions. If ADEQ's and USEPA's decision involves continuation of the monitoring program for the next 5-year period, or portion thereof, Florence Copper will adjust the cost estimates to reflect estimated costs for implementing that decision, and will adjust the financial assurance required for the period covered by ADEQ's and USEPA's decision.

During POC monitoring events, visual inspections of surface facilities will be conducted. Inspections will include, as appropriate, POC wells, signage, fences, re-vegetated areas, and storm water control measures. Conditions noted during inspections will be documented using inspection forms. Photographs and written reports will be used to document completion of indicated repairs. Repairs will be performed as indicated by the inspection monitoring program and will be documented in quarterly reports submitted to ADEQ and USEPA. Florence Copper will submit a notice and report, with documentation, in accordance with the requirements of A.A.C. R18-9-A209(C) within 30 days following completion of the post-closure plan.

8 Closure/Post-Closure Cost Estimates

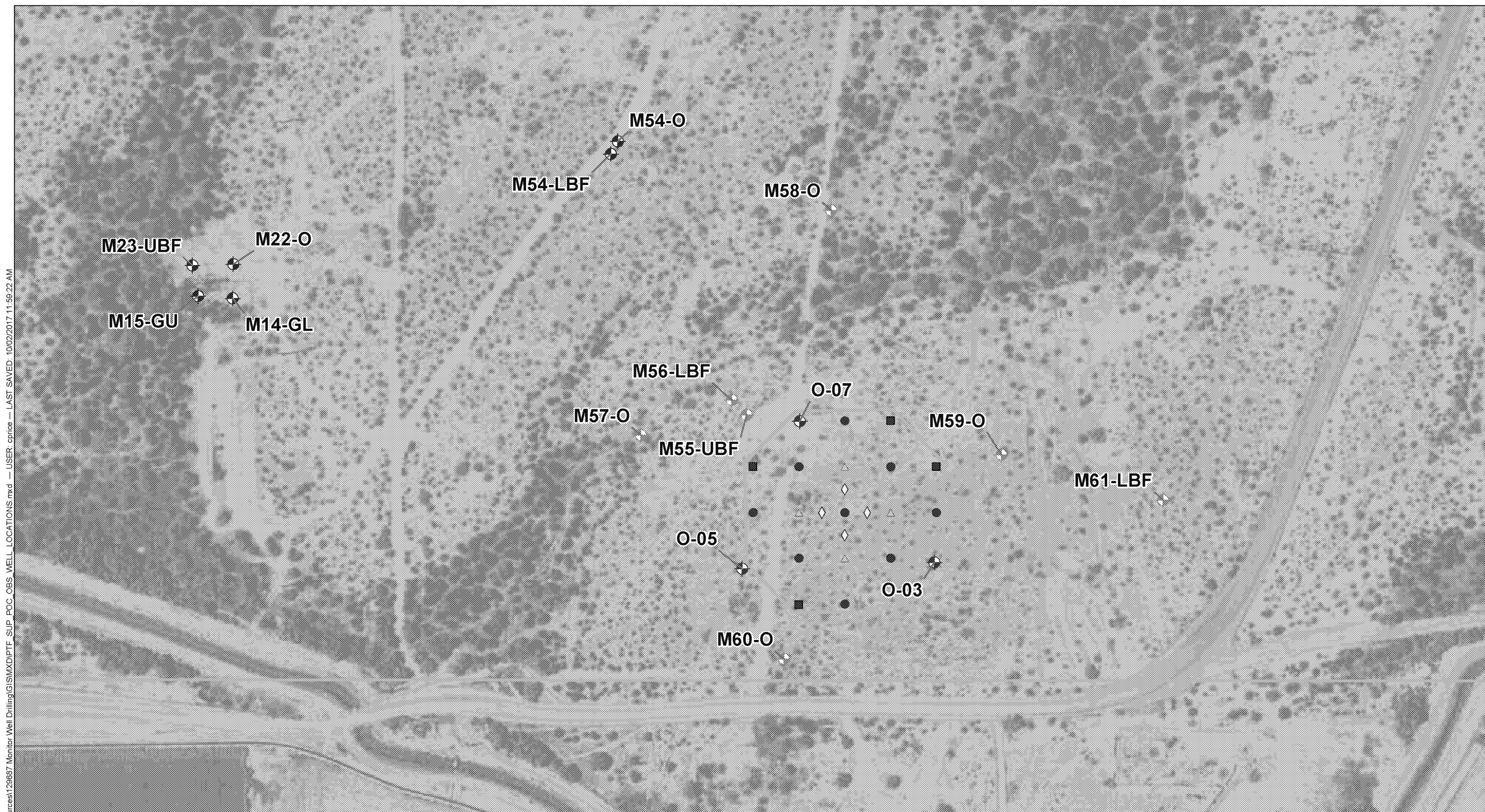
ADEQ requires an APP Permit applicant to provide cost estimates for the construction, operation, maintenance, closure, and post-closure care of facilities that are subject to individual permit requirements pursuant to A.R.S. § 49-241.B.

Components of the Florence Copper PTF that are subject to individual permit requirements include: an ISCR area including injection and recovery wells; a run-off pond; and a process water impoundment. The USEPA has mandated that the ISCR wellfield, injection and recovery wells, and other related facilities will be closed under the UIC Permit issued on 20 December 2016, and that financial assurance must be obtained through USEPA. ADEQ has acknowledged this requirement from USEPA and has asked that Florence Copper provide closure costs and bonding to ADEQ for the remaining discharging facilities. Closure costs to be covered under APP No. P-106360 include those for the process water impoundment and the run-off pond. Florence Copper submitted an updated closure and post-closure cost estimate to ADEQ with an application to amend APP P106360 in June of 2018. The closure/post-closure costs submitted with that application remain current and re-submitted herewith in Attachment A.

The closure cost items to be covered by financial assurance under APP No. P-106360 are listed in Table 3-1 included in Attachment A of this closure plan. A detailed description of the closure costs supporting the estimates is provided in Exhibit 2-1 in the notes accompanying Table 3-1. The closure cost items to be covered by financial assurance under UIC No. R9UIC-AZ3-FY11-1 are listed in the closure cost approval document provided by USEPA and also included in Attachment A of this closure plan.

FIGURES

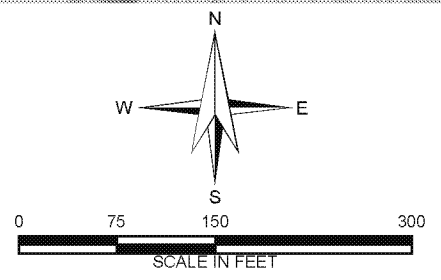
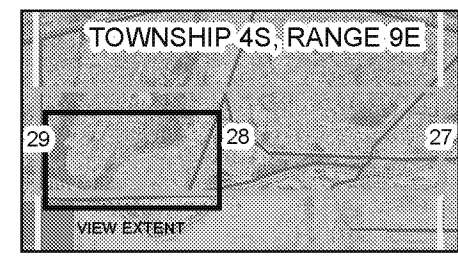
GIS FILE PATH: G:\Projects\Curis Resources\129687 Monitor Well Drilling\GIS\MXD\PTF_SUP_POC_OBS_WELL_LOCATIONS.mxd — USER: cprice — LAST SAVED: 10/02/2017 11:59:22 AM



- LEGEND**

 - PTF WELL FIELD
 - STATE LAND LEASE
 - EXISTING OBSERVATION WELL
 - SUPPLEMENTAL MONITORING WELL
 - POC WELL
- PROPOSED PTF WELL**

 - Injection
 - Observation
 - Recovery
 - Westbay Well



HALEY ALDRICH

FLORENCE COPPER PROJECT
FLORENCE, ARIZONA

WELL LOCATIONS

FLORENCE COPPER INC.

SCALE: AS SHOWN
OCTOBER 2017

ATTACHMENT A

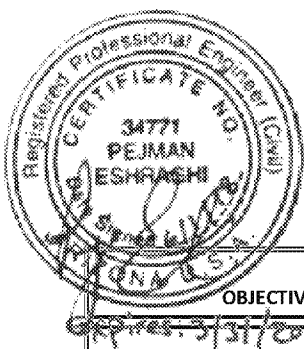


TABLE 3-1. FLORENCE COPPER INC. APP 106360 CLOSURE COST ESTIMATE

OBJECTIVES	DESCRIPTION OF TASKS	UNIT COST ¹	PER UNIT	NO. OF UNITS	ESTIMATED COST ²
PROCESS WATER IMPOUNDMENT AND PIPELINE CORRIDOR					
Impoundment Removal					
Includes evaporation/disposal of 9,725,300 gallons of liquid/sediment, removal/disposal of impoundment's liners and LCRS. Also includes removal of pipeline corridor and the backfilling and regrading of disturbed areas.	1. Closure Cost Estimate by Knight Piesold and Co. February 9, 2012. (Exhibit 5A) ⁴	\$456,000	Lump Sum	1	\$456,000
	Subtotal				\$456,000
Analysis of Soil Below Liner					
Quantities assume impoundment and pipeline corridor is approximately 9 acres.	1. Prepare Sampling Plan. ⁵	\$27,000	Lump Sum	1	\$27,000
	2. Contingency S&A if soil shows evidence of liner leak. (Assumed 5 sample locations per acre) ⁶	\$770	Sample	45	\$35,000
	3. Expanded Sampling for select analytes identified during screening. ⁷	\$600	Sample	90	\$54,000
	4. Contingency S&A for unanticipated costs.	\$16,000	Lump Sum	1	\$16,000
	Subtotal				\$132,000
Water Impoundment and Pipeline Corridor Total					\$588,000
RUN-OFF POND					
Liner and Earthwork					
Remove and dispose of liner in properly licensed off-site solid waste landfill. Test and properly manage soil below liner. (Assumed to be non-hazardous)	1. Remove liner. ⁸	\$0.05	SF	2,400	\$200
	2. Dispose of liner in off-site landfill. ⁹	\$70	Ton	1	\$70
	3. Dispose of miscellaneous pipeline in off-site landfill. ⁹	\$70	Ton	1	\$70
	4. Fill, compact, and recontour to near original contours (assumes berm material to be used as fill). ¹⁰	\$4	CY	245	\$980
	5. Contingency screening S&A if soil shows evidence of liner leak. (5 sample locations per acre) ⁶	\$770	Sample	5	\$3,850
	6. Expanded sampling for select analytes identified identified during screening. ⁷	\$600	Sample	10	\$6,000
	7. Contingency sampling and analysis for unanticipated costs.	\$16,000	Lump Sum	1	\$16,000
Run-off Pond Total					\$28,000
Closure Cost Subtotal					\$616,000
Contingency (15%)¹¹					\$24,000
Administrative and Miscellaneous Expenses (10%)¹¹					\$16,000
TOTAL CLOSURE COST					\$656,000
NOTES:					
1. The unit costs included in the cost estimate have been adjusted from their last revision on 4 September 2014 (see formula below) using a cumulative inflation factor of 1.07877 corresponding to an inflation rate of 7.0787% estimated from 2013 to 2017.					
2. The values of this column have been rounded up to the nearest thousand.					

TABLE 3-1. FLORENCE COPPER INC. APP 106360 CLOSURE COST ESTIMATE

OBJECTIVES	DESCRIPTION OF TASKS	UNIT COST ¹	PER UNIT	NO. OF UNITS	ESTIMATED COST ²
NOTES (Cont'd):					
3. Referenced Inflation Factors below, for each year, are from ADEQ document entitled, "Individual Aquifer Protection Permit Cost Estimate Inflation Factor Review Check List," revised 28 March 2018.					
Year	Inflation Factor				
2013	1.01490				
2014	1.01830				
2015	1.01002				
2016	1.01521				
2017	1.01799				
Cumulative Inflation Factor	1.07877				
4. Cost estimate for closure of the water impoundment and pipeline channel is provided by Knight Piesold and Co. " <i>Curis Resources (Arizona) Inc. Florence Copper Project PTF Process Solution Impoundment & Pipeline Channel Closure Cost Estimate</i> " May 9, 2012 and is included in RTC1.1.					
5. Sampling plan to describe collection, preparation, and analysis of parameters described in note 6.					
6. Sampling and Analysis (S&A): Initial S&A will be performed to characterize soil potentially affected by spills and leaks. Follow-up S&A may be required in order to determine the extent of contamination or effectiveness of remediation efforts. The estimated S&A cost is \$770 per sample is based on the following: sampling cost of \$140; analytical cost of \$630 for 13 priority pollutants including Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Se, Tl, Zn, pH, VOC's, SVOC's, SPLP, Acid-Base Accounting as reflected in current laboratory pricing.					
7. Expanded sampling for selected analytes identified during screening analysis. Assumes 2/3 amount of analytes and includes twice the amount of					
8. Liner Removal - unit cost per contractor estimate 2010, CPI adjusted to 2017.					
9. Disposal of non-hazardous waste - includes loading, transport, and disposal; unit cost source is 2010 contractor bid for similar project.					
10. Backfill unit cost - per contractor estimate, includes equipment and operator cost. CPI adjusted to 2017. Assumes backfill material import is not required. Reseeding of disturbed area is included in reclamation plan.					
11. Administrative support and expenses includes utilities and communications cost, miscellaneous equipment and site maintenance, and site management during closure. The closure cost estimate prepared by Knight Piesold for impoundment removal includes administrative and contingency costs. Therefore the impoundment removal cost is not included in the contingency and administrative cost calculations.					



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Memorandum

To: File

From: Nancy Rumrill, Drinking Water Protection Section

Date: March 29, 2018

Re: EPA Adjusted Cost Estimates for Financial Assurance

EPA Adjustment to Cost Estimates for Financial Assurance Amounts*

Elements of Financial Assurance costs	Florence Copper Cost Estimates, \$	EPA Adjusted Cost Estimate	Cost Estimate Differences	Comments
GW Restoration	1,748,591	2,721,780	973,189 ₁	
PTF Closure - w/BHP wells	721,537	721,537	0	
Post-Closure Monitoring	304,334	608,668	304,334 ₁	
Subtotals	2,774,462	4,051,985	1,277,523 ₁	
Contingency Cost Estimate	416,169	0	(416,169)	See footnote 1 below
Admin. & Misc. Cost Estimate	277,446	405,199	127,753	
Grand Totals	3,468,077	4,457,184	989,107	

*Information in this table is drawn from USEPA's Administrative Record (Document #593) for the 2017 Final UIC Class III Permit No. R9UIC-AZ3-FY11-1 (Florence Copper Inc., Arizona).

Footnotes

1. Contingency cost estimates are included in the restoration and post-closure monitoring cost estimates.
2. EPA adjusted estimate by subtracting 4 mine shaft sampling events from the GW restoration total (\$1,748,591-(4*1663) = 1,741,939). One month for closure period is approx.. \$1,741,939/16 months = \$108,871/month. With an additional time of 9 months estimated for complete restoration, the additional associated cost is approximately \$979,841 (est 9 months x \$108,871/month).

ATTACHMENT B

Draft Outline
Site Investigation Summary Report
Florence Copper Project
Production Test Facility

- 1) Introduction**
- 2) Site Description**
 - a) Discharging Facilities
 - b) Processing Facilities
 - c) Ancillary Facilities
- 3) Site Decommissioning and Closure Narrative**
 - a) PTF Well Field
 - b) Water Impoundment
 - c) Runoff Pond
 - d) Processing Facilities
- 4) Soil Characterization**
 - a) Soil Sampling Program Description
 - b) Lateral and Vertical Extent of Soil Contamination
 - c) Quantity and Character of Contaminated Soil Removed from the Site
 - d) Soil Disposal Facility Documentation
 - e) Quantity and Character of Contaminated Soil to Remain on Site
- 5) Groundwater Characterization**
 - a) Analysis of Operational Groundwater Monitoring Data
 - i) PTF Observation Wells
 - ii) Supplemental Monitoring Wells
 - iii) POC Wells
 - b) Water Sampling Program
 - c) Lateral and Vertical Extent of Groundwater Contamination
 - d) Quantity and Character of Contaminated Water Removed from the Site
 - e) Water Disposal Facility Documentation
 - f) Quantity and Character of Contaminated Groundwater Remaining at the Site
- 6) Fate and Transport of Contaminants Remaining at the Site**
 - a) Groundwater Model Description
 - b) Groundwater Model Simulation Parameters
 - c) Simulation Results
 - d) Fate and Transport Summary

ATTACHMENT C

MINERAL LEASE

11-26500

Florence Copper Inc.
1575 W. Hunt Highway
Florence, AZ USA 85132

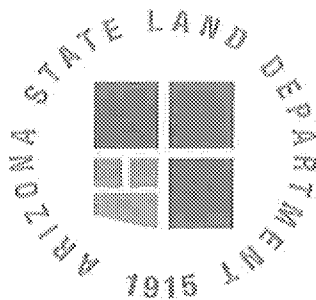
N2S2 Section 28, T4S, R9E
Pinal County

Term

December 13, 2013 – December 12, 2033

STATE LAND DEPARTMENT

STATE OF ARIZONA



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STATE OF ARIZONA

MINERAL LEASE

Lease No. 11-26500

This mineral lease ("Lease") is entered into by and between the State of Arizona ("the State" or "Lessor"), Arizona State Land Department ("Department"), through the State Land Commissioner ("Commissioner"), and Florence Copper Inc. ("Lessee"), pursuant to A.R.S. § 27-254. In consideration of the payment of rent and royalties and of performance by the parties of each of the provisions set forth herein, the parties agree as follows:

Article 1 LEASED LAND

- 1.1 Lease Provisions. Lessor hereby leases to Lessee, and Lessee hereby leases from Lessor, for the term, at the rent and royalty rate and in accordance with the provisions of this Lease, the State Land described below and in Appendix A ("Legal Description"), and as depicted in Appendix B ("Location Map") attached hereto and herein referred to as "the Leased Land".

Township 4S, Range 9E, Section 28, N2S2, Pinal County, 160.00 Acres

- 1.2 Lease Condition. Lessee takes the Leased Land "as is" and Lessor makes no expressed or implied warranties as to the physical condition of the Leased Land.

Article 2 TERM

- 2.1 Lease Term. The term of this Lease:

Commences on the 13th day of December 2013
And expires on the 12th day of December 2033

unless canceled earlier or terminated as provided herein or as provided by law. Notwithstanding provisions of this Lease relating to termination or cancellation, the provisions on environmental or other indemnification, restoration, reclamation and insurance requirements survive the termination or cancellation of this Lease and remain enforceable

- 2.2 Lease Termination. Upon the sale, exchange, redemption, reconveyance, relinquishment or taking, whether by eminent domain or institutional use, lease of all or any portion of the Leased Land shall terminate on the date of such taking as to the property so taken.

Article 3 RENT

- 3.1 Rental Requirement. Lessee shall pay rent to Lessor as follows for the use and occupancy of the Leased Land during the term of this Lease without offset or deduction and without notice or demand, as established on an annual basis.
- 3.2 Annual Rent and Adjustments. The annual rent is established by Lessor based on an August 1, 2014 appraisal of the Leased Land. Rent for this Lease shall be: \$60,500.00 per year. The rent will be billed in advance by the Department and is due on or before the anniversary date of the Lease. The Leased Land shall be reappraised and the annual rent reestablished after the Production Test Facility is completed and before the commercial phase of the operation is started.

Article 4 COMMODITIES and UNITS OF PRODUCTION

- 4.1 Mineral Commodity. Copper
- 4.2 Production Units. Tons (short)

Article 5 ROYALTY

- 5.1 Royalty Rate. Lessee shall pay the Lessor a royalty fee equal to a percentage of the gross value for all 'Minerals' (as defined in A.R.S. §27-231) 'Produced and Sold' (as that term is used in A.R.S. §27-234) from the Leased Land subject to such adjustments as may be permitted by the terms of this Lease.

- 5.1.1 Sliding Scale Factor: The Upper and Lower Limits (as defined in sections 5.1.2 and 5.1.3) utilized to determine the range of copper values upon which the Sliding Scale Factor ("SSF") is established, shall be re-evaluated and fixed on each January 1 over the Term of the Lease. The SSF shall range between two and eight percent. The SSF shall be calculated according to the following equation:

$$SSF = 6\% / (\text{Upper Limit} - \text{Lower Limit})$$

where: 6% represents the difference between the highest possible Royalty Rate (8%) and the lowest possible Royalty Rate (2%).

- 5.1.2 Upper Limit: The Upper Limit is defined as the copper price at which the maximum percentage royalty of 8% would be assessed.

As of December 13, 2013, the Upper Limit shall be \$3.98 per pound of copper. After January 1, 2015, the Upper Limit shall be reestablished annually on each January 1 such that it equals the numeric average of the monthly copper price, defined in section 5.2 as the Copper Index Price ("CIP"), calculated for the prior sixty (60) months plus one standard deviation for that same sixty (60) month period.

- 5.1.3 **Lower Limit:** The Lower Limit is defined as the Modified Break-Even Copper Price, which is that copper price where the mining project associated with the Leased Land (i.e. the Florence Copper Project) has a net present value ("NPV") of zero.

As of December 13, 2013, the Lower Limit shall be \$2.81 per pound of copper. The Lower Limit shall be reestablished annually after January 1, 2015 by the Arizona State Land Department. The Lower Limit shall be the weighted average of the total production cost based on the future projections of mine revenue and operating cost (life of mine) as reported by Lessee to Lessor and to the Arizona State Department of Revenue ("DOR") annually pursuant to DOR Property Tax Form 82061-A.

- 5.1.4 **Royalty Rate:** The Royalty Rate, for the period from January 1, 2014 to December 31, 2014 shall be two percent whenever the monthly average CIP is \$2.81 per pound or less (Lower Limit), and shall be eight percent whenever the monthly average CIP is \$3.98 per pound or more (Upper Limit). The Royalty Rate shall be calculated for any CIP that occurs within the range between \$2.81 per pound and \$3.98 per pound as follows:

$$\text{Royalty Rate} = [(CIP - \text{Lower Limit}) \times \text{SSF}] + \text{Minimum Royalty Rate}$$

where: CIP = monthly Copper Index Price
Lower Limit = copper price fixed each January 1
SSF = Sliding Scale Factor
Minimum Royalty Rate = 2% (according to A.R.S. § 27.234.C)

- 5.2 **Market Value:** The CIP shall be the average monthly "US Transaction" price as reported by *Platts Metals Week Price Notification Monthly Report*¹

In the event that the above price ceases to be published, or for any reason becomes inappropriate for the purpose of this lease, a replacement CIP shall be selected by the Commissioner using a nationally recognized pricing index for major mineral commodities.

- 5.3 **Gross Value:** The gross value for each calendar month shall be the sum, expressed in United States dollars, of all minerals produced and sold during the previous calendar month. The gross value for copper produced and sold during a calendar month shall be calculated as follows:

$$\text{Gross Value} = \text{CIP} \times \text{Pounds of Copper Produced and Sold}$$

where: CIP = copper index price
Pounds of Copper Produced and Sold = pounds of copper produced and sold for the previous calendar month

The gross value for other minerals produced and sold during the calendar month shall be calculated in a manner similar to the gross value for copper produced and sold, valued in accordance with A.R.S. §27-234.

- 5.4 **Monthly Royalty:** Each calendar month, Lessee shall pay the Lessor the Royalty (the "Monthly Royalty") calculated based on minerals produced and sold from the Leased Land during the prior calendar month. The amount of the Monthly Royalty shall be calculated as follows:

$$\text{Monthly Royalty} = \text{Gross Value} \times \text{Royalty Rate}$$

where: Gross Value = calculated as defined in Section 5.3
Royalty Rate = percentage as defined in Section 5.1

¹ Copyright © 2009 The McGraw-Hill Companies, Inc.

- 5.5 **Other Minerals:** In the event that other minerals or mineral products are produced and sold from the Leased Land, they shall be valued in accordance with A.R.S. §27-234 and similarly included in the computation of gross value. Should the mineral or mineral product not have a published price, the gross value shall be based on an appraisal that estimates the fair market price of the mineral (A.R.S. §27-234.B). This shall not apply to by-products from the waste water treatment plant.
- 5.6 **Production Reports:** Monthly production reports, including documentation when required, shall be submitted to the Lessor for each month, including reports for negative production, after the first month of production. Reports are due on or before the 15th of each month following the month of production.
- 5.7 **Minimum Annual Royalty:** Lessee shall pay to Lessor a minimum royalty of \$1,000.00 at the signing of the Lease, and a minimum royalty of \$3,200.00 each year thereafter on or before the anniversary of the Commencement Date of the Lease. The minimum annual royalty shall be a credit for Lessee, fully recoupable against production royalties (the Monthly Royalty in Article 5.4) due to Lessor for material used or removed; however, the entire portion of minimum annual royalty unused or not recouped upon the termination or expiration of the Lease shall be the sole property of Lessor. Lessee shall pay the minimum annual royalty each year regardless of use or removal of materials. The minimum annual royalty shall be a continuing credit during the term of the Lease.
- 5.8 **Royalty Payments:** Royalty payments shall be due within thirty (30) days after billing by the Department.
- 5.9 **Appraisal Costs:** If, during the term of this Lease, the Lessor determines that a new appraisal is appropriate pursuant to A.R.S. §27-234.C, the Lessor shall arrange for such appraisal and the Lessee shall pay to Lessor within 30 days of the Lessor's request the cost of the appraisal. Such reappraisal shall be required after the completion of the Production Test Facility and before the commercial phase of the operation is started to reestablish the royalty rate.
- 5.10 **Failure to Pay:** If Lessee fails to pay royalty or appraisal costs described in this Article, on or before the date the payment is due, the amount due accrues interest at the rate and in the manner determined pursuant to A.R.S. §42-1123. If it is determined that failure to pay royalty is not due to reasonable cause, a penalty of five percent (5%) of the amount found to be remaining due shall be added to the royalty for each month or fraction of a month elapsing between the due date and the date on which it is paid. The total penalty shall not exceed one-third (1/3) of the royalty remaining due. The penalty so added to the royalty is due and payable within (10) days of notice and demand from the Commissioner. If any royalty, appraisal assessment, interest, or penalty is not paid by the Lessee when due, the unpaid amounts constitute a lien from the date the amounts become due on all property and rights to property belonging to the Lessee that are located on the Leased Land.

Article 6 USE OF LEASED LAND

- 6.1 **Purpose.** The Leased Land is leased to Lessee for the purposes of mineral extraction and for uses related thereto and no other use.
- This Lease confers the right to extract, process and ship minerals, mineral compounds, and mineral aggregates from the Leased Lands within planes drawn vertically downward through the exterior boundary lines thereof.
- 6.2 **Consistent With Mine Operating Plan.** Any use of the Leased Land must be performed in a manner consistent with the approved Mine Operating Plan as required under the provisions of Article 21.

Article 7
RECORDS AND INSPECTION

- 7.1 **Annual Records.** Lessee shall provide the following records on an annual basis to Lessor on or before each anniversary of the effective date of this Lease:
- 7.1.1 Annual Operations Status Report which includes: an itemized statement of mineral production, total tons of materials mined and processed, total acres disturbed, and total acres reclaimed, and an annual groundwater monitoring report.
- 7.1.2 Relevant Arizona State Department of Revenue form(s) (82061-A for copper, 82061-B for non-copper, 82061-C for small-scale mines).
- 7.1.3 Any additional records pertinent to appraisal, compliance with this Lease and mineral production deemed necessary by the Commissioner.

Article 8
TAXES; ADDITIONAL AMOUNTS

- 8.1 **Assessments Paid By Lessee.** Lessee shall pay all assessments and charges for utilities and communication services, and assessments imposed pursuant to any construction on the Leased Land, all permit and authorization fees, all taxes, duties, charges and assessments of every kind or nature imposed by any public, governmental or political subdivision authority pursuant to any currently or subsequently enacted law, ordinance, regulation or order, which during the term of this Lease, becomes due or are imposed upon, charged against, measured by or become a lien on (a) the Leased Land, (b) any improvements or personal property of Lessee located on the Leased Land, and (c) the interest of Lessee to this Lease or in the proceeds received by Lessee from any assignment or sublease of the Leased Land.
- 8.2 **Assessment Deadline.** Lessee shall pay or cause to be paid all amounts required to be paid under Paragraph 8.1 before any interest, penalty, fine or cost accrues for nonpayment.

Article 9
WAIVER

- 9.1 **Waiver Definition.** Acceptance of rent and/or royalty payments by Lessor shall not constitute a waiver by Lessor of any violation by Lessee of the provisions of this Lease.
- 9.2 **Future Waiver.** No waiver of a breach of any provision of this Lease shall be construed as a waiver of any succeeding breach of the same or any other provision.

Article 10
IMPROVEMENTS

- 10.1 **Non-Permanent Improvements.** This Lease confers the right to Lessee to place non-permanent improvements consistent with the approved Mine Operating Plan as required under the provisions of Article 21. Upon the expiration, termination or abandonment of this Lease, Lessee shall be obligated to

remove improvements consistent with Approved Reclamation Plan as required under the provisions of Article 22. To the extent that non-permanent improvements may remain following closure and reclamation as required under Article 22, Lessee shall have the right to remove the improvements if all monies owing to the State under the terms of this Lease have been paid.

Article 11 LESSEE'S COOPERATION; INGRESS AND EGRESS

- 11.1 Reasonable Department Ingress. Representatives of the Department may enter, and Lessee shall maintain access to the Leased Land at reasonable times to inspect the workings, improvements and other facilities used to extract or sever minerals from Leased Land. Representatives of the Department may enter at reasonable times to obtain factual data or access to records pertinent to mineral production required to be kept under the terms of this Lease and otherwise ascertain compliance with the law and the terms of this Lease.
- 11.2 Reasonable Notice. Inspections, investigations, and audits conducted under Article 11.1 shall be on reasonable notice to Lessee unless reasonable grounds exist to believe that notice would frustrate the enforcement of the law or the terms of this Lease.
- 11.3 Lessee Appearance at Commissioner's Office. The Commissioner may require Lessee to appear at reasonable times and on reasonable notice at the Commissioner's office and produce such records and information as are specified in the notice to determine compliance with the terms of this Lease.
- 11.4 Lessee Cooperation. Lessee shall cooperate with Lessor in Lessor's inspection, appraisal and management of the Leased Land and permit reasonable access by Lessor's employees to isolated State Land across Lessee's private land during the term of this Lease.
- 11.5 Lessee Interference. Lessee shall not unreasonably interfere with the authorized activities of Lessor's employees, agents, other lessees, and permittees or right-of-entry holders on the Leased Land.
- 11.6 Established Rights-of-Way. This Lease is made subject to all legally established rights-of-way heretofore granted or that may hereafter be granted over and across the Leased Land.
- 11.7 Ingress and Egress to Other State Lands. This Lease confers the right of ingress and egress to other State land, whether or not leased for purposes other than mining.

Article 12 LOSS OR WASTE

- 12.1 Lessee Waste. Lessee shall not cause, nor grant permission to another to cause, any waste (destruction, misuse, alteration, or neglect) in or upon the Leased Land. This provision does not apply to activities authorized by this Lease that are subject to the reclamation and environmental requirements of this Lease.

Article 13
NATIVE PLANTS AND CULTURAL RESOURCES

- 13.1 **Native Plants.** Lessee shall not move, use, destroy, cut or remove or permit to move any used, destroyed, or cut timber, cactus, native plants, standing trees or products of the land except that which is necessary for the use of the Leased Land, and then only with the prior written approval of Lessor. Lessee must submit a plant survey prior to the removal of any native plants. If the removal or destruction of plants protected under the Arizona Native Plant Law (A.R.S. § 3-901 et seq., or any successor statutes) is necessary to the use of the Leased Land, Lessee shall also obtain written approval of the Arizona Department of Agriculture. In the event Lessee removes the native plants, Lessee must pay a vegetation fee to Lessor and this fee is not a reimbursable improvement. Lessee is responsible for treatment of all regulated and restricted noxious weeds listed by the Arizona Department of Agriculture.
- 13.2 **Invasive Species.** Measures to limit the introduction of invasive species and any additional non-native species will be accomplished using Best Management Practices. This will include the use of certified weed-free straw or fiber roll logs for use in reclamation and/or sediment containment.
- 13.3 **Cultural Resources.** Prior to initiating any operation or activity requiring surface or ground disturbance, Lessee shall comply with all conditions and provisions of the most recently approved plans and agreements associated with the National Historic Preservation Act of 1996. If prehistoric or historic features, artifacts or properties, vertebrate paleontological sites, including fossilized footprints, inscriptions made by human agency or any other archaeological, paleontological or historical feature are encountered, Lessee shall immediately cease all work in the immediate vicinity of the encounter and notify and consult with the State Historic Preservation Office (SHPO), the Arizona State Museum (ASM) and the Department regarding avoidance, preservation, recovery and/or curation.

Lessee further agrees that:

- 13.3.1 Lessee shall ensure that all cultural resource investigations on the Leased Land are permitted pursuant to A.R.S. §41-841, et seq., and that the investigations and resulting reports satisfy the terms of the permit.
- 13.3.2 Lessee shall ensure that two copies of the report describing the results of the completed cultural resource survey of the Leased Land are submitted to Lessor for Lessor's use in consulting with SHPO pursuant to A.R.S. §41-861, et seq.
- 13.3.3 Lessee shall cause no surface disturbance within the boundaries of any known archaeological sites without Lessor approval.
- 13.3.4 If any previously unknown human remains, funerary objects, sacred ceremonial objects or objects of tribal patrimony, archaeological, paleontological or historical site or object that is at least 50 years old are encountered during surface disturbing activities, Lessee shall cease operations immediately and report the discovery to Lessor and to the Director of the ASM pursuant to A.R.S. §41-844.
- 13.3.5 At any and all times that ground disturbing activities are being performed on the Leased Land, Lessee shall have a qualified archaeologist on site to monitor the operations and insure compliance with the provisions of Article 13.3.

Article 14
PROTECT LAND, PRODUCTS AND IMPROVEMENTS

- 14.1 **Reasonable Means**. Lessee is hereby authorized to use means which are reasonable and which do not result in a breach of the peace or in creating a concealed hazard, to protect the Leased Land and improvements against waste, damage and trespass. In the event of known trespass on the Leased Land resulting in damage thereto, Lessee shall make reasonable efforts to notify Lessor and appropriate law enforcement authorities.
- 14.2 **Fencing**. Lessee shall, at its expense, fence all shafts, prospect holes, adits, tunnels, process ponds and other dangerous mine workings for the protection of public health and safety and livestock.
- 14.3 **Compliance with Applicable Regulations**. Lessee shall comply with all requirements of any governmental agency having jurisdiction over Lessee's activities on the Leased Land.

Article 15
RESERVATIONS, RELINQUISHMENTS TO UNITED STATES

- 15.1 **Rights-of-Ways and Easements**. Lessor reserves the right to grant rights-of-way, easements and sites over, across, under or upon the Leased Land for public highways, railroads, utility lines, pipelines, irrigation works, flood control, drainage works and other purposes.
- 15.2 **Relinquishing Lands for Federal Projects**. Lessor reserves the right to relinquish to the United States land needed for irrigation works in connection with a government reclamation project and to grant or dispose of rights-of-way and sites, for canals, reservoirs, dams, power or irrigation plants or works, railroads, tramway, transmission lines or any other purpose or use on or over the Leased Land.
- 15.3 **Compensation Waiver**. In the event of such relinquishment, grants or disposals, Lessee waives all right to any compensation whatsoever against Lessor except as may be allowed under the provisions of Article 16 and as limited therein.

Article 16
CONDEMNATION

- 16.1 **Division of Condemnation Awards**. Lessor, any pertinent leasehold mortgagees and, if Lessee is not in default, Lessee, shall cooperate in prosecuting and collecting their respective claims for an award on account of a taking of all or any portion of the Leased Land and all damages or awards (with any interest thereon) to which Lessor, Lessee or any pertinent leasehold mortgagees may be entitled by reason of any taking of all or any portion of the Leased Land (herein referred to as "Condemnation Proceeds"). In the event of the taking or condemnation by any competent authority for any public or quasi-public use or purpose of all or any portion of the Leased Land at any time during the Lease Term, the rights of Lessor, Lessee, or any leasehold mortgagees, to share in the net proceeds of any award for land, buildings, improvements and damages upon any such taking, shall be apportioned as follows:
- (i) Lessee shall receive that portion attributed to the then fair market value of the buildings and improvements constructed thereon and Lessee shall receive the fair market value immediately prior to such taking of Lessee's leasehold interest in the Leased Land so taken;

(ii) Lessor shall receive the fair market value of its reversionary interest under this Lease (exclusive of any value attributable to improvements).

The entire amount of the award, settlement or payment attributable to the value of buildings and improvements shall belong to Lessee.

- 16.2 **Lease Termination.** If the whole or materially all of the Leased Land shall be taken or condemned by a competent authority, this Lease shall cease and terminate and all rental, additional rent and other charges hereunder shall be apportioned as of the date of vesting of title in such taking or condemnation proceedings. For the purposes of this Article, a taking or condemnation of materially all of the Leased Land, as distinguished from a taking or condemnation of the whole of the Leased Land, means a taking of such scope that: (a) the untaken portion of the Leased Land is not reasonably usable for Lessee's purposes or is insufficient to permit the reclamation of the then existing improvement thereon or is insufficient to permit the recovery of the cost of reclamation of the then existing improvements thereon, or (b) the remaining untaken portion of the Leased land and the improvements thereon are incapable of producing a proportionately fair and reasonable net annual income, taking into consideration the payment of all operating expenses thereof including but not limited to the net rental, additional rental and all other charges herein reserved and after the performance of all covenants, agreements and provisions herein provided to be performed by Lessee. The determination of what constitutes a fair and reasonable net annual income shall be governed by reference to the average net annual income produced by the Leased Land during the five-year period immediately preceding the taking (or, if the taking occurs during the first five years of the Lease Term, during the Lease Term to date). As used above, the term "operating expenses" does not include depreciation or income taxes. If there is any controversy as to whether materially all of the Leased Land has been taken, the controversy shall be resolved by arbitration.

If materially all of the Leased Land are taken or condemned, then Lessee, at its option, upon thirty (30) days prior notice to Lessor, given at any time within ninety (90) days after the vesting of title in the condemnor, may cancel and terminate this Lease as to the entire Leased Land. The rent and other charges hereunder shall be prorated as of this date of termination.

- 16.3 **No Termination of Lease.** In the event of a partial taking or condemnation, i.e. a taking or condemnation of less than materially all of the Leased Land, this Lease (except as hereinafter provided) shall nevertheless continue, but the rent for the Lease Year in which such condemnation occurs shall be prorated as of the date of such condemnation and that portion of the rent attributable to that portion of the Leased Land so taken shall be credited to Lessee's obligations next arising under this Lease and the rent shall be reduced proportionately to reflect the loss of the land taken.

- 16.4 **Temporary Taking of Lease.** If the whole or any part of the Leased Land or of Lessee's interest under this Lease be taken or condemned by any competent authority for its or their temporary use or occupancy for a period which is fewer than four (4) months, this Lease shall not terminate by reason thereof and Lessee shall continue to pay, in the manner and at the times herein specified, the full amounts of the rent and all additional rent and other charges payable by Lessee hereunder, and, except only to the extent that Lessee may be prevented from so doing pursuant to the terms of the order of the condemning authority, to perform and observe all of the other terms, covenants, conditions and obligations hereof upon the part of Lessee to be performed and observed, as though such taking or condemnation had not occurred. If the whole or any part of the Leased Land or Lessee's interest in this Lease be taken or condemned by a competent authority for its or their temporary use or occupancy for a period which is in excess of four (4) months, this Lease may be terminated at the option of Lessee upon notice given within thirty (30) days of the taking or condemnation. Notwithstanding anything to the contrary herein, in the event of any temporary taking or condemnation Lessee shall, if this Lease has not been terminated as provided in this Article, be entitled to receive the entire amount of any award made for such taking or condemnation, whether paid by way of damages, rent or otherwise, unless such period of temporary use or occupancy shall extend to or beyond the Expiration Date, in which case such award shall be apportioned between Lessor and Lessee as of such Expiration Date.

Article 17
USE OF WATER

- 17.1 **Groundwater Rights.** Lessee shall be entitled to the use on the Leased Land of groundwater as defined in A.R.S. §45-101, or any successor statute, for purposes consistent with this Lease. Lessee shall obtain all required permits from the Arizona Department of Water Resources ("ADWR"). If Lessee shall develop any groundwater on the Leased Land, Lessee shall not acquire any rights with respect to the groundwater, except the right to use such water in accordance with applicable law, on the Leased Land during this Lease.
- 17.2 **Alternate Groundwater Source.** If Lessee uses, on the Leased Land, groundwater, or water from other sources, that use shall not (1) cause such water or any rights with respect to that water to be appurtenant to the Leased Land, or (2) affect in any way Lessee's rights with respect to the water, or unlawfully degrade groundwater quality.
- 17.3 **Well Abandonment.** Prior to the Lessee vacating the Leased Land, Lessee agrees to contact the Department to confirm whether the well(s) are required to be abandoned or capped. If requested by the Department, the Lessee may be required to conduct groundwater quality analysis. All fees associated with well capping, abandonment, and groundwater quality analysis shall be borne by the Lessee.
- 17.4 **Surface Water Rights.** The rights of Lessor and Lessee concerning the application for an establishment of any rights with respect to surface water as defined in A.R.S. §45-101, or any successor statute, shall be governed by State law.
- 17.5 **Validity of Surface Water Rights.** Nothing in the provisions of this Lease shall affect the validity of any rights established by or for Lessor or Lessee with respect to surface water, as defined in A.R.S. §45-101, prior to the commencement date of this Lease.
- 17.6 **Establishment of Water Rights.** The application for and establishment by Lessor or Lessee (as agent of the State of Arizona) of any surface or groundwater rights shall be in the name of the State of Arizona (Arizona State Land Department), and; such rights shall attach to and become appurtenant to the Leased Land in accordance with the provisions of A.R.S. Title 45, Chapters 1 and 2.
- 17.7 **Lessor Notification.** Lessee shall promptly notify Lessor in writing of any initial filings made by Lessee with any governmental agency or court concerning the establishment or adjudication of any claim to a water right relating to the Leased Land. Upon request of Lessor, Lessee shall furnish copies of any document filed with the agency or court.
- 17.8 **Annual Report.** The ADWR requires an annual report of groundwater pumped from non-exempt well(s) within both Active Management Areas and Irrigation Non-Expansion Areas. If applicable, Lessee shall submit to ADWR the Annual Water Withdrawal and Use Report and associated fees within the time period specified by ADWR. Lessee shall provide a copy of such report to Lessor.
- 17.9 **Water Use Not Beneficial to Lease.** If Lessee desires to move groundwater off the Leased Land, or use groundwater for purpose(s) different from those stated in this Lease, Lessee shall file an application with Lessor for a public auction water sale. Movement of groundwater from the Leased Land prior to a public auction is prohibited.
- 17.10 **Guarantee of Availability or Quality.** Lessor, by issuing this Lease, makes no guarantee with respect to groundwater availability or groundwater quality.
- 17.11 **Lessor's Access.** Lessee shall provide the Lessor's personnel access to well(s) on the Leased Land.

Article 18
DEFAULT AND CANCELLATION

- 18.1 **Default Definition.** Violation by Lessee of any provision of this Lease shall be a default hereunder entitling Lessor to any and all remedies it may have under State law.
- 18.2 **Lease Cancellation.** Upon any such default, this Lease may be canceled pursuant to A.R.S. §37-289 or any successor statute.
- 18.3 **Cancellation for Conflict of Interest.** Pursuant to A.R.S. § 38-511, the State or any department or agency of the State may, within three years after its execution, cancel any lease, without penalty or further obligation, made by the State or any of its departments or agencies if any person significantly involved in initiating, negotiating, securing, drafting or creating the lease on behalf of the State or any of the departments or agencies of the State, is at any time while the lease is in effect, an employee or agent of any other party to the lease in any capacity or a consultant to any other party of the lease with respect to the subject matter of the lease. A cancellation made pursuant to this provision shall be effective when Lessee receives written notice of the cancellation unless the notice specifies a later time. (moved from 23.12)
- 18.4 **Lessee Lease Termination.** Lessee may terminate this Lease at any time during its term by giving the Commissioner thirty (30) days written notice of the termination, if Lessee is not delinquent in the payment of rent, royalty or appraisal fees to the date of termination, and if the Leased Land has been reclaimed to a condition satisfactory to the Commissioner.

Article 19
INDEMNIFICATION AND INSURANCE

- 19.1 **Lessee Defense of Actions or Proceedings.** In case an action or proceeding is brought against Lessor by reason of any such occurrence, Lessee, upon Lessor's request and at Lessee's expense, will resist and defend such action or proceedings, or cause the same to be resisted and defended either by counsel designated by Lessee or, where such occurrence is covered by liability insurance, by counsel designated by the insurer.
- 19.2 **Indemnification of State of Arizona.** To the extent allowed by law, Lessee shall defend, indemnify and hold harmless the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees (hereinafter for Article 19 referred to as "State of Arizona") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorneys' fees, and costs of claim processing, investigation and litigation) (hereinafter referred to as "Claims") for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of Lessee or any of its owners, officers, directors, agents, employees or sublessees, arising out of or related to Lessee's occupancy and use of the Leased Land. It is the specific intention of the parties that the State of Arizona shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the State of Arizona, be indemnified by Lessee from and against any and all claims. It is agreed that Lessee will be responsible for primary loss investigation, defense and judgment costs where this indemnification is applicable. This indemnity shall not apply if the Lessee or sublessee(s) is/are an agency, board, commission or university of the State of Arizona.
- 19.3 **A. Minimum Scope and Limits of Insurance.** Lessee shall procure and maintain until such time as all obligations under the terms of this Lease are met, insurance against claims for injury to persons or

damage to property which may arise from or in connection with the Lease.

The insurance requirements herein are minimum requirements for this Lease and in no way limit the indemnity covenants contained in this Lease. The State of Arizona in no way warrants that the minimum limits contained herein is sufficient to protect the Lessee from liabilities that might arise out of the performance of this Lease. Lessee is free to purchase additional insurance.

Lessee shall provide coverage with limits of liability not less than those stated below:

1. Commercial General Liability (CGL) – Occurrence Form

Policy shall include bodily injury, property damage, personal and advertising injury, Explosion, Collapse, and Underground (XCU), and products and completed operations.

• General Aggregate	\$2,000,000
• Products – Completed Operations Aggregate	\$1,000,000
• Personal and Advertising Injury	\$1,000,000
• Damage to Rented Premises	\$ 50,000
• Each Occurrence	\$1,000,000

a. The policy shall be endorsed, as required by this Lease, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the use and/or occupancy of the Leased land.

b. Policy shall contain a waiver of subrogation endorsement as required by this Lease in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees for losses arising out of the use and/or occupancy of the Leased Land.

2. Excess/Umbrella Liability in the minimum amount of \$5,000,000 to follow form the primary CGL policy.

3. Business Automobile Liability. To cover all owned, hired and/or non-owned of Lessee in the minimum amount of \$1,000,000.

NOTE LIMIT:

If hazardous materials are to be transported **\$5,000,000**

*If the Lease includes hazardous materials transportation, the automobile liability policy shall include the following endorsements:

- CA 99-48 Pollution Liability – broadened coverage for covered autos
- MCS-90 (Motor Carrier Act) – endorsements
 - a. The policy shall provide **Automobile Pollution Liability** specific to the transportation of hazardous materials.

The policy shall be endorsed as required by this Lease, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Lessee, involving automobiles owned, leased, hired or borrowed by the Lessee.

Policy shall contain a waiver of subrogation endorsement as required by this Lease in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Lessee.

4. Worker's Compensation and Employers' Liability

- Workers' Compensation Statutory
 - Employers' Liability
 - Each Accident \$1,000,000
 - Disease – Each Employee \$1,000,000
 - Disease – Policy Limit \$1,000,000
- a. Policy shall contain a waiver of subrogation endorsement as required by this Lease in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Lessee.
- b. This requirement shall not apply to: Separately, EACH contractor or subcontractor exempt under A.R.S. § 23-901, AND when such contractor or subcontractor executes the appropriate waiver (Sole Proprietor/Independent Contractor) form.

5. Contractor's (Lessee's) Pollution Liability

For losses caused by pollution conditions that arise from the operations of the Lessee as described in this lease, Lessee shall also require its contractor(s) to provide coverage for activities performed by or on behalf of the Lessee.

Each Occurrence	\$10,000,000
General Aggregate	\$10,000,000

- a. Coverage must be *identified as specific to the operations* as described in the Lease.
- b. Must include coverage pollution losses arising out of completed operations.
- c. The policy should be written on an "occurrence" basis with no sunset clause.
- d. Pollution coverage must apply to all phases of the work described in the Lease.
- e. The policy shall include coverage for bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death and medical monitoring costs.
- f. The policy shall include coverage for property damage including physical damage to or destruction of tangible property and the resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not been physically damaged or destroyed including diminution in value.
- g. The policy shall include coverage for Environmental damage including physical damage to soil, surface water or ground water, or plant or animal life, caused by Pollution Conditions and giving rise to Cleanup Costs.
- h. The policy shall include defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages.
- i. The policy shall include coverage for asbestos and lead, mold, and no exclusions.
- j. The policy shall include Non-Owned Disposal Site coverage.
- k. The policy shall be endorsed as required by this Lease to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Lessee.
- l. Policy shall contain a waiver of subrogation endorsement as required by this Lease in favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Lessee.

- m. Should any of the work involve treatment, storage or disposal of hazardous wastes, the Lessee shall furnish an insurance certificate from the disposal facility establishing that the facility operator maintains current Pollution Legal Liability Insurance in the amount of not less than \$10,000,000 per occurrence / \$10,000,000 annual aggregate and will cover sudden and gradual pollution losses arising from the facility, associated with work performed under this Lease.

Minimum Scope of Coverage: For pollution losses arising from the Lessee's operation, coverage shall apply to sudden and gradual pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in Bodily Injury or Property Damage. The policy should include the following coverages:

- i. Bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death and medical monitoring costs
- ii. Property damage, including physical injury to or destruction of tangible property including the resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not been physically injured or destroyed and diminution in value.

6. Pollution Legal Liability

Lessee shall provide coverage and cause its contractor(s) to provide coverage as required for the acceptance, storage or disposal of any hazardous materials, with limits of at least:

Each Occurrence	\$10,000,000
Annual Aggregate	\$10,000,000

- a. Coverage must be *identified as specific to the operations and specific site(s)* described in the Lease.
- b. Pollution coverage must apply to all locations utilized for the acceptance, storage or disposal of any hazardous materials
- c. The policy shall include bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death and medical monitoring costs.
- d. The policy shall include property damage including physical damage to or destruction of tangible property including the resulting loss of use thereof, clean-up costs, and the loss of use of tangible property that has not been physically damaged or destroyed.
- e. For losses that arise from the disposal facility that is accepting hazardous material, coverage shall apply to sudden and non-sudden pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in cleanup costs, bodily injury or property damage.
- f. The policy shall include defense, including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensatory damages.
- g. The policy shall be endorsed as required by this Lease, to include the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees as additional insureds with respect to liability arising out of the activities performed by or on behalf of the Lessee.
- h. Policy shall contain a waiver of subrogation endorsement as required by this Lease in

favor of the State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees for losses arising from work performed by or on behalf of the Lessee.

B. Additional Insurance Requirements. The policies shall include, or be endorsed to include, these provisions:

1. The State of Arizona, and its departments, agencies, boards, commissions, universities, officers, officials, agents, and employees wherever additional insured status is required. Such additional insured shall be covered to the full limits of liability purchased by Lessee, even if those limits of liability are in excess of those required by this Lease
2. Lessee's insurance coverage shall be primary insurance with respect to all other available sources.
3. Coverage provided by Lessee shall not be limited to the liability assumed under the indemnification provisions of this Lease.
4. If Lessee's Contractors and/or Subcontractors do not have or cannot obtain such coverage, Lessee's certificate(s) may include all its Contractors/Subcontractors as insureds under its policies or Lessee shall be responsible for ensuring and/or verifying that all Contractors/Subcontractors have collectable insurance as evidenced by the certificates of insurance and endorsements for each Contractor/Subcontractor. All coverages for Contractors/Subcontractors shall be subject to the applicable insurance requirements identified above. The Department reserves the right to require, at any time, proof from the Lessee that its Contractors/Subcontractors have the required coverage.

C. Notice of Cancellation: Each insurance policy required by the insurance provisions of this Lease shall not be suspended, voided, cancelled, reduced in coverage or in limits except after thirty (30) days' prior written notice has been given to the State of Arizona. Such notice shall be sent directly to:

Minerals Section
Arizona State Land Department
1616 West Adams Street
Phoenix, Arizona 85007

and shall be sent by certified mail, return receipt requested.

D. Acceptability of Insurers. Lessee's insurance shall be placed with companies licensed in the State of Arizona or hold an approved non-admitted status on the Arizona Department of Insurance List of Qualified Unauthorized Insurers. Insurers shall have an "A.M. Best" rating of not less than A- VII. The State of Arizona in no way warrants that the above-required minimum insurer rating is sufficient to protect the Contractor from potential insurer insolvency.

E. Verification of Coverage. Lessee shall furnish Lessor with certificates of insurance (ACORD form or equivalent approved by the State of Arizona) as required by this Lease. The certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. All certificates and endorsements are to be received and approved by Lessor before the Lease Term commences. Each insurance policy required by this Lease must be in effect at or prior to the commencement of this Lease and must remain in effect for the duration of this Lease. Failure to maintain the insurance policies as required by this Lease or to provide timely evidence of renewal will be considered a material breach of this Lease. All certificates required by this Lease shall be sent directly to the Department. The Department's Lease number (11-26500) and location description of the Leased Land are to be noted on the certificate of insurance. Lessor reserves the right to require complete, certified copies of all insurance policies and endorsements required by this Lease at any time.

- F. **Modifications:** Any modification or variation from the insurance requirements in this Lease shall be made by the Lessor in consultation with the Arizona Department of Administration, Risk Management Division. Such action will not require a formal Lease amendment, but may be made by administrative action.
- G. **Approval:** The Lessor reserves the right to review, or make modifications to the insurance limits, required coverages or endorsements throughout the life of this Lease as deemed necessary. In such event, the Lessor shall provide the Lessee with written notice of such and the Lessee shall comply within thirty (30) days of receipt thereof.

Article 20

ENVIRONMENTAL MATTERS

- 20.1 **Definition of Regulated Substances and Environmental Laws.** For purposes of this Lease, the term "Environmental Laws" shall include but not be limited to any relevant federal, state or local environmental laws, and the regulations, rules and ordinances relating to environmental matters, and publications promulgated pursuant to the federal, state and local laws and any rules or regulations relating to environmental matters applicable to Lessee's operations on the Leased Land. For the purpose of this Lease, the term "Regulated Substances" shall include but not be limited to substances defined as "regulated substance," "solid waste," "hazardous waste," "hazardous materials," "hazardous substances," "toxic materials," "toxic substances," "inert materials," "pollutants," "toxic pollutants," "herbicides," "fungicides," "rodenticides," "insecticides," "contaminates," "pesticides," "asbestos," "environmental nuisance," "criminal littering," or "petroleum products" as defined in Environmental Laws.
- 20.2 **Compliance with Environmental Laws.** Lessee shall strictly comply with all applicable Environmental Laws, including, without limitation, water quality, air quality, and handling, transportation, storage, treatment, or disposal of any Regulated Substance on, under, or from the Leased Land. Without limiting the foregoing, compliance includes that Lessee shall: (i) comply with all reporting obligations imposed under Environmental Laws; (ii) obtain and maintain all permits required by Environmental Laws and provide copies to Lessor within ten business days of receipt of the permits; (iii) provide copies of all documentation relating to the Leased Land as required by Environmental Laws to Lessor within ten business days of Lessee's submittal and/or receipt of the documentation; (iv) during the Term of this Lease, provide copies of all information it receives or obtains regarding any and all environmental matters relating to the Leased Land, including but not limited to environmental audits relating to the Leased Land regardless of the reason for which the information was obtained or whether or not the information was required by Environmental Laws; and (v) prevent treatment, storage, disposal, handling or use of any Regulated Substances within the Leased Land without prior written authorization from Lessor. The permitted use of Regulated Substances in the performance of lease activities shall not exempt future obligation of Lessee to remediate any environmental condition that may result from such use. Lessor retains full right to require future remediation or restoration.
- 20.3 **Designated Compliance Officer.** Lessee at all times shall employ or designate an existing employee, consultant or representative (the "Designated Compliant Officer") who is responsible for knowing all Environmental Laws affecting Lessee and Lessee's business and monitoring Lessee's continued compliance with applicable Environmental Laws. Upon request by Lessor, Lessee shall make the Designated Compliance Officer available to discuss Lessee's compliance, answer any questions, and provide such reports and confirming information as Lessor may reasonably request.
- 20.4 **Environmental Audit.** At any time, Lessor may request Lessee to provide an environmental audit of the Leased Land performed by an Arizona registered professional engineer or an Arizona registered geologist. Lessee shall pay the entire cost of the audit.

- 20.5 **Environmental Assessment.** At any time during the Term of this Lease, with reasonable cause, Lessor may require Lessee to obtain a Phase I environmental assessment of the Leased Land, performed in accordance with most current ASTM standard by an Arizona registered professional engineer or an Arizona registered geologist. If, based upon the Phase I environmental assessment or its own independent investigation, Lessor identifies any possible violation of Environmental Laws or the terms of this Lease, Lessor may require Lessee to conduct additional environmental assessments as Lessor deems appropriate for the purpose of ensuring that the Leased Land are in compliance with Environmental Laws. The Phase I assessment, or any other assessment required by Lessor, shall be obtained for the benefit of both Lessee and Lessor. A copy of the Phase I report shall be provided both to Lessee and Lessor. Lessor, in its sole discretion, shall have the right to require Lessee to perform additional assessments of any damage to the Leased Land arising out of any violations of Environmental Laws. If Lessee fails to obtain any assessment required by Lessor, Lessee shall pay the entire costs of any and all assessments required by Lessor, notwithstanding the expiration or termination of this Lease.
- 20.6 **Indemnity for Environmental Damage.** Lessee shall defend, indemnify and hold Lessor harmless from and against any and all liability, obligations, losses, damages, penalties, claims, environmental response and cleanup costs and fines, and actions, suits, costs, taxes, charges, expenses and disbursements, including legal fees and expenses of whatever kind or nature (collectively, "claims" or "damages") imposed on, incurred by, or reserved against Lessor in any way relating to or arising out of any non-compliance by Lessee, Lessee's successors or sublessees, with any Environmental Laws, the existence or presence from and after the Commencement Date of this Lease of any Regulated Substance, on, under, or from the Leased Land, and any claims or damages in any way relating to or arising out of the removal, treatment, storage, disposition, mitigation, cleanup or remedying of any Regulated Substance on, under, or from the Leased Land by Lessee, its agents, contractors, or subcontractors.
- 20.7 **Scope of Indemnity.** This indemnity shall include, without limitation, claims or damages arising out of any and all violations of Environmental Laws regardless of any real or alleged fault, negligence, willful misconduct, gross negligence, breach of warranty, or strict liability on the part of any of the indemnities. This indemnity shall survive the expiration or termination of this Lease and/or transfer of all or any portion of the Leased Land and shall be governed by the laws of the State.
- 20.8 **Lessee's Participation in the Defense.** In the event any action or claim is brought or asserted against Lessor which is or may be covered by this indemnity, Lessee shall fully cooperate and pay for the defense of the action or claim including but not limited to the following: (i) the conduct of any required cleanup, removal or remedial actions and/or negotiations, (ii) the conduct of any proceedings, hearings, and/or litigation, and (iii) the negotiation and finalization of any agreement or settlement. Lessor shall retain the right to make all final decisions concerning the defense.
- 20.9 **Restoration.** Prior to the termination of this Lease and in addition to those obligations set forth in this Lease, Lessee shall restore the Leased Land by removing or remediating any and all Regulated Substances to the satisfaction of the Lessor. In addition, the restoration shall include, but not be limited to, removal of all waste and debris deposited by Lessee. If the Leased Land or any portions thereof are damaged or destroyed from the existence or presence of any Regulated Substance or if the Leased Land or any portions thereof are damaged or destroyed in any way relating to or arising out of the removal, treatment, storage, disposition, mitigation, cleanup or remedying of any Regulated Substance, Lessee shall arrange, at its expense, for the repair, removal, remediation, restoration, and reconstruction to the Leased Land, and groundwater in accordance with the approved mine reclamation and closure plans under Article 22. In any event, any damage, destruction, or restoration by Lessee shall not relieve Lessee from its obligations and liabilities under this Lease. The insurance provisions within this Lease shall remain in place until such time as the required restoration is complete and approved by the regulatory authority and the Lessor.

Article 21
MINE OPERATING PLAN

- 21.1 **Approved Mine Operating Plan.** All development or mining operations, or any use of the Leased land shall be performed in a manner consistent with an approved Mine Operating Plan, submitted as part of Lessee's Mineral Development Report entitled "Mineral Extraction Operating Plan – Reclamation and Closure Plan" as revised March 13, 2014. The Approved Mine Operating Plan shall comply with Lessee's final, approved Temporary Individual Aquifer Protection Permit (No. P-106360), which Lessee must obtain from the Arizona Department of Environmental Quality ("ADEQ"). The Mine Operating Plan is to conform to the Department's plan requirements, and be submitted to and approved by the Department prior to the commencement of any operation upon the Leased Land.
- 21.2 **Lessee Performance.** Upon approval, Lessee shall perform all operations in a manner and time consistent with the Mine Operating Plan.
- 21.3 **Mine Operating Plan Amendments.** Amendments to the Mine Operating Plan must be filed with and approved by the Department whenever the operation deviates from previously approved plans, including mine expansion. Any amendments to the Mine Operating Plan will require changes to the Approved Reclamation Plan in Article 22.1 and may also require changes to the amount of the Reclamation Bond in Article 22.3. Upon completion of the Production Test Facility, and before Lessee starts the commercial phase of the mining operation, the Mine Operating Plan and Approved Reclamation Plan will require major amending or complete revision.
- 21.4 **Compliance of Agents and Subcontractors.** Lessee shall comply, and assure that its agents, sublessees and subcontractors comply with the applicable transportation laws and ordinances pertaining to operation of trucks on roadways and Lessee shall consult with the Arizona Department of Transportation to address safety issues.
- 21.5 **Overburden Piles.** Overburden piles resultant from mining shall be placed and maintained (with riprap if necessary) to prevent any eroded sediment from entering washes.
- 21.6 **Drainage Report.** Lessee shall prepare and submit to Lessor a drainage report which identifies appropriate steps required to control runoff, minimize erosion, maintain water quality and otherwise prevent any adverse impacts on perennial surface flow. Failure to comply with such requirements shall constitute a default hereunder. Such report is subject to Lessor's approval and Lessor may seek input from ADEQ. At no time will Lessee permit a permanent body of water, not identified in the ADEQ permit, to be maintained on the site; however it is acknowledged that heavy rain falls and/or wet seasons may result in storm water temporarily collecting on the Leased Land.

Article 22
RECLAMATION AND CLOSURE PLANS AND CONDITIONS

- 22.1 **Detailed Reclamation and Closure Plan.** Lessee shall not commence mining activities unless or until Lessor shall have approved in writing the Reclamation and Closure Plan ("Approved Reclamation Plan"), including any amendments thereto, submitted as part of Lessee's Mineral Development Report entitled "Mineral Extraction Operating Plan – Reclamation and Closure Plan" as revised March 13, 2014. The Approved Reclamation Plan shall comply with Lessee's final, approved Temporary Individual Aquifer Protection Permit (No. P-106360), which Lessee must obtain from ADEQ including the Closure and Post-Closure Plans. Reclamation shall include contouring and landscaping the land to match in a natural manner the surrounding native landscape and landforms and shall be performed concurrent with ongoing mining activities to the extent practicable. Reclamation shall include processes and procedures as identified in the Temporary Individual Aquifer Protection Permit, and as approved by the Lessor.

Reclamation shall also include contouring and landscaping all other portions of the State Trust land parcel disturbed by Lessee not specifically identified in or made part of the Approved Reclamation Plan.

- 22.2 **Final Reclamation.** Lessee shall complete final reclamation within one hundred twenty (120) days following the end of the Lease Term. Such final reclamation shall be in accordance with the Approved Reclamation Plan.
- 22.3 **Reclamation Bond.** Upon Lessor's approval of the Approved Reclamation Plan and prior to the commencement of mining activities, Lessee shall provide Lessor with a bond or other form of security to insure the full performance of Lessee's reclamation and closure activities. The form of such bond or security shall be subject to Lessor's written approval. The amount of the bond or security shall be \$63,000.00. This amount is intended to cover reclamation of the approximately 14 acres of surface to be used by the Production Test Facility at a cost of \$4,500.00 per acre. Upon completion of the Production Test Facility, and before Lessee starts the commercial phase of the mining operation, the amount of the bond or security will be reassessed. At Lessee's expense, Lessor may obtain the services of a consultant to help determine the amount and sufficiency of the new bond or security requirement based on the then-prevailing reclamation costs and the progress of Lessee's concurrent reclamation efforts. Lessor shall have the sole discretion to determine the acceptable amount of bond or security if conditions change during the term of this Lease. When Lessor notifies Lessee in writing of the acceptable amount of the bond or security, Lessee shall increase or decrease the bond or security within thirty (30) days thereafter.

Article 23 MISCELLANEOUS

- 23.1 **Lessee Rights.** This Lease grants Lessee only those rights expressly granted herein.
- 23.2 **Lease Governance.** This Lease shall be governed by, construed, and enforced according to State laws.
- 23.3 **Applicable Rules, Regulations, and Laws.** This Lease is subject to all current and subsequently enacted rules, regulations and laws applicable to State land as though fully set forth herein.
- 23.4 **Fee Interest.** No provisions of this Lease shall create any right or interest in Lessee to a fee interest in the Leased Land
- 23.5 **Non-Availability of Funds.** Every obligation of the State under this Lease is conditioned upon the availability of funds appropriated or allocated for the payment of such obligation. If funds are not allocated and available for the continuance of this Lease, this Lease may be terminated by the State at the end of the period where funds are available. No liability shall accrue to the State if this provision is exercised, and the State shall not be obligated or liable for any future payments or any damages as a result of termination under this paragraph.
- 23.6 **Non-discrimination.** Lessee shall comply with Executive Order 99-4, which mandates that all persons, regardless of race, color, religion, sex, age, national origin or political affiliation, shall have equal access to employment opportunities, and all other applicable State and federal employment laws, rules, and regulations, including the Americans with Disabilities Act. Lessee shall take affirmative action to ensure that applicants for employment and employees are not discriminated against due to race, creed, color, religion, sex, national origin or disability.
- 23.7 **Lessor Liability.** Lessor shall be forever wholly absolved from any liability for damages which might result to Lessee in the event this Lease is found to be void, canceled, forfeited or terminated prior to the Expiration Date or in the event this Lease is not renewed.

- 23.8 **Failure to Receive Title**. If, for any reason, it is determined that Lessor has failed to receive title to any of the Leased Land, this Lease is void insofar as it related to the Leased Land to which Lessor has failed to receive title. In such event Lessee waives all right to any compensation as against Lessor, except prorated reimbursement for prepaid rent.
- 23.9 **Reasonable Attorney's Fees**. In any action arising out of this Lease, the prevailing party shall recover reasonable attorneys' fees incurred therein in addition to the amount of any judgment, costs and other expenses as determined by the court. In the case of Lessor, reasonable attorneys' fees shall be calculated at the reasonable market value for such services when rendered by private counsel notwithstanding that it is represented by the Arizona Attorney General's Office or by other salaried counsel.
- 23.10 **Arbitration**. In the event of a dispute between the parties to this Lease, it is agreed to use arbitration to resolve the dispute but only to the extent required by A.R.S. §12-1518; and, in no event shall arbitration be employed to resolve a dispute which is otherwise subject to judicial review pursuant to A.R.S. §12-901, et seq., and administrative review by the Department pursuant to statute or Department Administrative Rule.
- 23.11 **Document Delivery Requirements**. Any notice to be given or other documents to be delivered by one party to the other shall be in writing and served by personal delivery or by depositing same in the United States mail, postage prepaid. Correspondence to the Department shall be addressed as follows:

Minerals Section
Arizona State Land Department
1616 West Adams Street
Phoenix, Arizona 85007

Correspondence to Lessee shall be made to the address of record as indicated following Lessee's signature line(s) herein. Each party is obligated to promptly notify the other party in writing of any change in the foregoing addresses. Notice shall be deemed adequate if sent to the last known address of record.

- 23.12 **Effective Lease Terms**. Any attempt to assign, sublease, convey, and transfer or otherwise dispose of any estate or interest in this Lease, for a time period that exceeds the Lease Term, shall not be effective and shall be cause for cancellation.
- 23.13 **Lessor Supervision**. The Department shall not be responsible for the supervision of any activities conducted under the terms of this Lease.
- 23.14 **Current Lease Agreement**. This Lease, together with all attached Appendices, embodies the whole agreement between the parties. This document supersedes all previous communications, representations and agreements, oral or written, between the parties. There are no other agreements or terms, oral or written.
- 23.15 **Lease Execution**. This document is submitted for examination. This is not an option or offer to lease or grant a permit. This document shall have no binding effect on the parties unless and until executed by Lessor (after execution by Lessee), and a fully executed copy is delivered to Lessee.

Article 24
ASSIGNMENT

- 24.1 Lease Assignment. Lessee, if not in default in the payment of any monies owed the State in regard to this Lease and having kept and performed all the conditions of this Lease, may, with the written consent of Lessor, assign this Lease.
- 24.2 Filing Lease Assignments. Copies of assignments pertaining to the Leased Land shall be filed with Lessor.

Article 25
RENEWAL

- 25.1 Lease Renewal. Upon application to the Department not less than thirty (30) nor more than one hundred and twenty (120) days prior to the Expiration Date, Lessee, if a bona fide resident of the State or legally authorized to transact business in the State, shall have a preferred right to renewal for a term as provided by law, bearing even date with the Expiration Date subject to requirements of A.R.S. § 37-284 and A.R.S. § 27-235 if applicable. The preferred right of renewal shall not extend to Lessee if there has not been substantial compliance with the terms of this Lease or if the Leased Land was not used as prescribed in this Lease, unless for good cause the failure to perform was given written authorization by the Department. If the Department determines the continued leasing of the land to Lessee is not in the best interest of the State, this Lease will not be renewed.

Article 26
HOLDOVER LESSEE

- 26.1 Surrender of Possession. Within one hundred twenty (120) days after expiration or termination of this Lease, Lessee agrees to surrender to Lessor peaceful and uninterrupted possession of the Leased Land. Holdover tenancy by Lessee is prohibited and shall be deemed a trespass for which Lessor may seek all appropriate legal remedies; except that Lessee if in good standing and who has filed a timely application for renewal may continue to occupy and use the Leased Land with Department approval, pursuant to the terms of this Lease, pending action on the renewal application by Lessor.

Appendix A
LEGAL DESCRIPTION

STATE OF ARIZONA LAND DEPARTMENT
1616 W. ADAMS
PHOENIX, AZ 85007

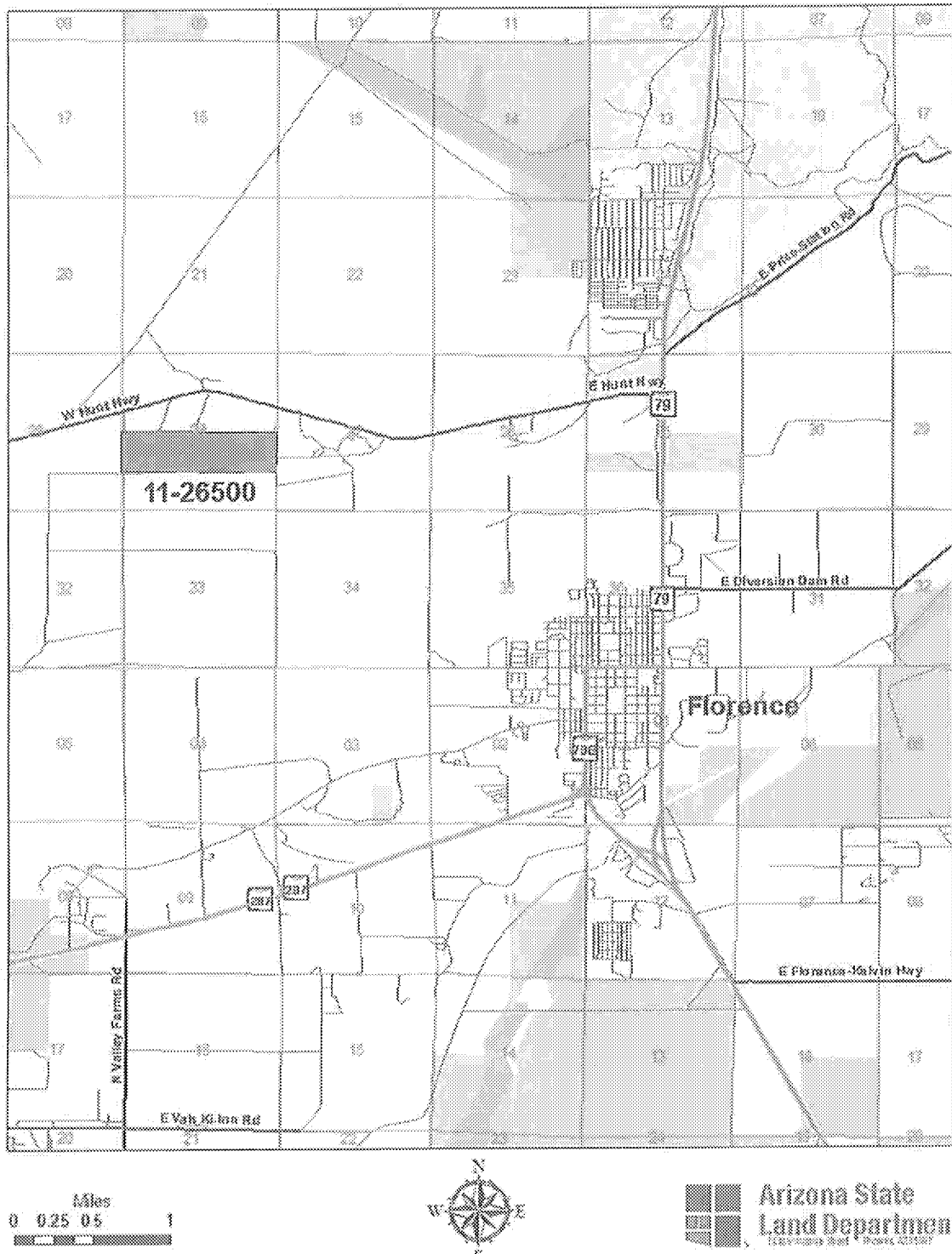
KE-LEASE#: 11-26500-00

APPTYPE: RENEWAL

AMENDMENT#: 0

<u>LAND #</u>	<u>LEGAL DESCRIPTION</u>	<u>ACREAGE</u>
T4S, R9E, S28	N2S2	160.00

Appendix B
GENERAL LOCATION MAP

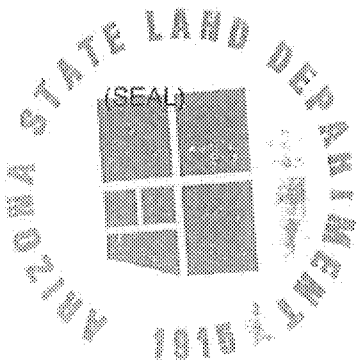


IN WITNESS HEREOF, the parties hereto have signed this Lease effective the day and year set forth in Article 2.1

ARIZONA STATE LAND DEPARTMENT
State Land Commissioner

By: _____

Janessa P. Hickman



FLORENCE COPPER INC.

Lessee

Authorized Representative

Title

Signature

Date

Address

City

State

Zip

Rita Napier, Executive Vice President

December 15, 2014

1575 W. Hart Hwy

Florence, Ariz.

85132

ATTACHMENT D

2. RECLAMATION AND CLOSURE PLAN

This Reclamation and Closure Plan (RCP) addresses the reclamation and closure of the pilot-scale PTF that Florence Copper proposes to construct and operate on State Land under Mineral Lease No. 11-26500. The PTF is described in Section 1.1. Florence Copper has received a Temporary APP (No. P-106360). The Temporary APP will expire after one year but may be extended for up to one additional year. If ADEQ and USEPA issue permits authorizing commercial ISCR operations before the Temporary APP expires, all PTF components will become subject to the closure requirements of those permits. If permits authorizing commercial operations are not approved before the Temporary APP expires, the PTF will be closed and post-closure monitoring will be performed in accordance with the Temporary APP. In all cases, the PTF operations and closure and post-closure activities will also be subject to requirements of permits issued by USEPA.

Section 2.9.2 of the Temporary APP describes the groundwater restoration process required to meet APP and UIC closure plan requirements and to prepare the PTF site for reclamation required by Mineral Lease No. 11-26500. The closure plans require the restoration of groundwater within the injection zone and the plugging and abandonment of all wells in the PTF well field. The Temporary APP closure plan also requires the removal of all material used in or produced by the PTF, including liquid and sediment in the water impoundment; all process equipment, tanks and structures; all liners and equipment used in the water impoundment and runoff pond; and all piping and liners associated with the pipeline corridor. The Temporary APP closure plan also requires that soil be tested and remediated as necessary to meet residential soil remediation levels (SRLs) and groundwater protection limits (GPLs), and that all excavated areas be backfilled and contoured to natural (pre-operational) grade. The estimated costs and financial assurance for all closure activities described above are shown in Appendix L.

The closure activities described are to be implemented in accordance with the Mined Land Reclamation Plan, accepted by the Arizona State Mine Inspector (ASMI) on 28 August 1997. A copy of the 1997 Mined Land Reclamation Plan is included in Appendix P. Further, Florence Copper has met the financial assurance requirements, consistent with the APP and UIC regulations, to ensure this RCP meets the requirements for preparing disturbed areas for revegetation and revegetating the disturbed areas. The areas to be revegetated include all of the area occupied by the PTF. However, the cost for revegetating the water impoundment area and the pipeline corridor is included in the estimated APP closure costs as described in Appendix L. The estimated costs for the PTF reclamation and closure plan shown in Appendix L accordingly include all reclamation costs except for the costs associated with the water impoundment and the pipeline corridor.

2.1 Reclamation Alternatives

The following discussion of reclamation alternatives is specific to the PTF, which is not a commercial mineral extraction process but is a test facility proposed for the purpose of confirming and advancing ISCR techniques for the recovery of copper from the Poston Butte copper deposit. Florence Copper will apply for an APP and a UIC permit authorizing commercial ISCR operations before the Temporary APP issued for the PTF expires. If the permits authorizing commercial operations are issued before the Temporary APP expires, PTF operation and closure will be subject to the requirements of those

permits. The commercial operations will involve most of the State Land. Therefore, it will be necessary to develop a revised operating plan and a new reclamation and closure plan that will include all areas involved in the commercial operations and all areas affected by PTF operations.

The RCP has been developed in adherence to the applicable requirements as set forth in the *Documentation Guidelines and Requirements for Mineral Operations on State Trust Lands*, and the plan approval criteria established under A.R.S §27-235.

The following discussion of alternatives is based on the assumption that permits authorizing commercial operations will not be issued before the PTF's Temporary APP expires, and that the PTF will have to be closed in accordance with the Temporary APP and the anticipated UIC Permit. Because of the very high value of the copper deposit beneath the State Land, it is assumed that ASLD would not consider the preferred land use following the closure of the PTF to be a post-mineral extraction land use but would prefer to keep the State Land available for future mining use. In that case, ASLD may request that some components, such as the SX/EW, plant be left in place. Although leaving components in place could form the basis of two or more alternatives, no information is available for estimating the length of time the components would be left in place or the impacts that the deferred removal would have on final reclamation costs. For the reasons described above, there appears to be only one alternative for which cost estimates can be prepared. That alternative is the only alternative described below.

2.1.1 *Alternative A: Preferred Alternative*

This alternative assumes that all areas closed in accordance with the closure plan included in Appendix M will be reclaimed in accordance with this RCP, except that the reclamation of the water impoundment and the pipeline corridor is included in the Temporary APP closure plan. This RCP also addresses roads that will not be needed to provide access to wells located on State Land. Access to POC wells will be required because post-closure monitoring will be required for the PTF and for the larger FC project site.

2.1.2 *Alternative B*

Not applicable.

2.1.3 *Alternative C*

Not applicable.

2.2 Reclamation Approach

2.2.1 *Proposed Area of Disturbance*

The proposed area of disturbance to be reclaimed, as shown on Figure 2, includes 7,310 linear feet of secondary access roads and approximately 11 acres of disturbance related to the installation and operation of the PTF well field, the beneficiation area, and run-off pond and abandoned wells.

2.2.2 *Equipment and Structural Removal*

Removal of all equipment and structures is covered in the Temporary APP closure plan included in Appendix M. PTF wells will be plugged and abandoned in accordance with Arizona's relevant well abandonment requirements (i.e., A.A.C. R12-15-816, A.R.S. § 45-402 *et seq.*, and the ADWR Well Abandonment Handbook), as well as relevant and applicable Federal requirements (i.e., 40 CFR §146.10).

2.2.3 *Waste Dumps, Stockpiles, Tailings*

The only stockpiled material existing on site will be material produced during construction of the runoff pond and water impoundments described in Appendices C and D, respectively. All stockpiles will be used to backfill pond or impoundment excavations following liner removal, or they will be removed or graded to restore natural topography. Re-grading will be conducted in a manner that will minimize storm water runoff.

2.2.4 *Settling/Filtration Ponds*

No settling or filtration ponds will be constructed at the PTF. The runoff pond and water impoundment will be removed, re-graded, and revegetated in accordance with the Temporary APP closure plan provided in Appendix M. Following removal of the pond and impoundment liners, the excavations will be backfilled and re-graded to restore natural topography minimize impacts from storm water runoff.

2.2.5 *Roads, Power Lines, Water Lines, Fences*

Roads will be scarified and revegetated. Power lines, water lines, and fences will be removed in accordance with the Temporary APP closure plan provided in Appendix M.

2.2.6 *Post-Mineral Extraction Site Preparation*

Site preparation will include scarification of disturbed areas, which will provide a shallow ripping of the disturbed surface areas to promote seed germination and inhibit runoff.

2.2.7 *Revegetation/Seeding*

Hydro-seeding will be used to revegetate disturbed areas. Seeds will be applied as described below.

SEED MIXTURE

Plant Species	Induced or Native Species	Minimum Precipitation (inches)	Seeds Per Pound	Seeding Rate (pounds per acre)
Inland saltgrass	Native	8	520,000	2
Castle Valley saltbush	Native	6	30,300	4
Shade scale	Native	4	64,900	3

SEED MIXTURE

Plant Species	Induced or Native Species	Minimum Precipitation (inches)	Seeds Per Pound	Seeding Rate (pounds per acre)
Sideoats	Native	8	191,000	3
Bottlebrush squirreltail	Native	6	192,000	3
Alkali Sacaton	Native	6	1,758,000	2
Arizona cottontop	Native	7	980,000	2

2.2.8 Slope Stabilization

All slopes will be graded back to natural grade.

2.2.9 Erosion and Drainage Control

Drainage of the areas to be reclaimed will be by overland flow in their natural flow pattern to the south. Contouring and scarification will be used to inhibit excessive runoff. Straw bales and/or silt fences will be placed at select locations to inhibit sediment transport.

2.3 Reclamation Scheduling and Timing

Reclamation will begin following completion of closure in accordance with the Temporary APP closure plan (Appendix M). Seeding will occur between September 15 and November 30.

2.4 Personnel

Reclamation will be accomplished by contractors directed by Florence Copper personnel.

2.5 Post-Mineral Extraction Care

The need for post-closure care will be minimal because all ISCR-related materials and structures will have been removed from the PTF site, and all disturbed soil will have been returned to natural grade and re-seeded. Post-closure care will include groundwater monitoring at POC wells in accordance with Temporary APP and the UIC permit requirements. Monitoring personnel will observe the condition of the site and will include notes regarding any unusual conditions in their quarterly reports. The cost estimate provided in Appendix L includes costs for reseeding during two fall seasons as a contingency.

2.6 Reclamation Projected Costs

The unit costs developed for Reclamation Plan Alternative A are based primarily on two key cost estimating databases (RS Means Facilities Construction Cost Data – 2004 and RACER Cost Estimating software version 8.1.2), along with estimated productivity for material movement based primarily on

the Caterpillar Handbook (Edition 31). The estimated costs developed for this RCP Alternative A include:

- Disturbed area reclamation;
- Road reclamation;
- Care and maintenance;
- Cost adjustment; and
- Administrative costs.

The sources and calculation of the estimated reclamation costs are detailed in Appendix L.

2.6.1 Re-grading Cost

Re-grading costs are included in the road reclamation cost described in Section 2.6.3 below.

2.6.2 Structure Demolition Cost

No structure demolition costs are anticipated.

2.6.3 Road Reclamation Cost

There is an estimated 7,310 linear feet of facility roads that will be reclaimed, and there is an estimated 11 acres of disturbed area due to wells and well installation.

The sources and calculation of the estimated reclamation costs are detailed in Appendix L.

2.6.4 Care and Maintenance Cost

Care and maintenance for the reclamation effort at this operation consists of:

- An annual inspection of the Site;
- Annual reporting; and
- Application of additional seeding as needed to promote revegetation.

The sources and calculation of the estimated reclamation costs are detailed in Appendix L.

2.6.5 Construction Cost

No construction costs are anticipated.

2.6.6 Plant Removal Cost

No plant removal costs are anticipated.

2.6.7 *Administrative Cost*

Administrative costs are detailed in Appendix L.

2.6.8 *Total Reclamation Cost*

The total estimated reclamation cost for this Reclamation Plan is provided in Appendix L. Bonding for these costs is covered under Temporary APP and ASMI.

2.7 Reclamation and Closure Report

Florence Copper will provide a Reclamation and Closure Report to ASLD within 30 days of completion of final reclamation. The closure report will document all past and final reclamation efforts. Final reclamation requirements and procedures will be coordinated with the ASLD along with maintenance and monitoring. The report will describe any unique reclamation issues related to closure if such issues occur. Quarterly status reports will be provided until vegetation has been established. The closure report will document final reclamation, including responses to emergency situations and mitigation measures that address environmental impacts and safety hazards. The report will represent a time-line of reclamation efforts. Post-mineral extraction and final reclamation aerial photographs will be provided.

2.8 Reclamation Summary

Reclamation will include areas closed in accordance with the closure plans of the Temporary APP issued by ADEQ for the PTF and secondary roads not needed for access to post-closure monitoring wells.

3. REFERENCES

Arizona State Land Department, Documentation Guidelines and Requirements for Mineral Operations on Arizona State Trust Lands, 01-2004.

Caterpillar Performance Handbook, Edition 31, Caterpillar Inc., October, 2000.

RACER Cost Estimating software v. 8.1.2., 2006.

RS Means, Facilities Construction Cost Data, 2004, 19th Annual Edition, Reed Construction Data, 2003.